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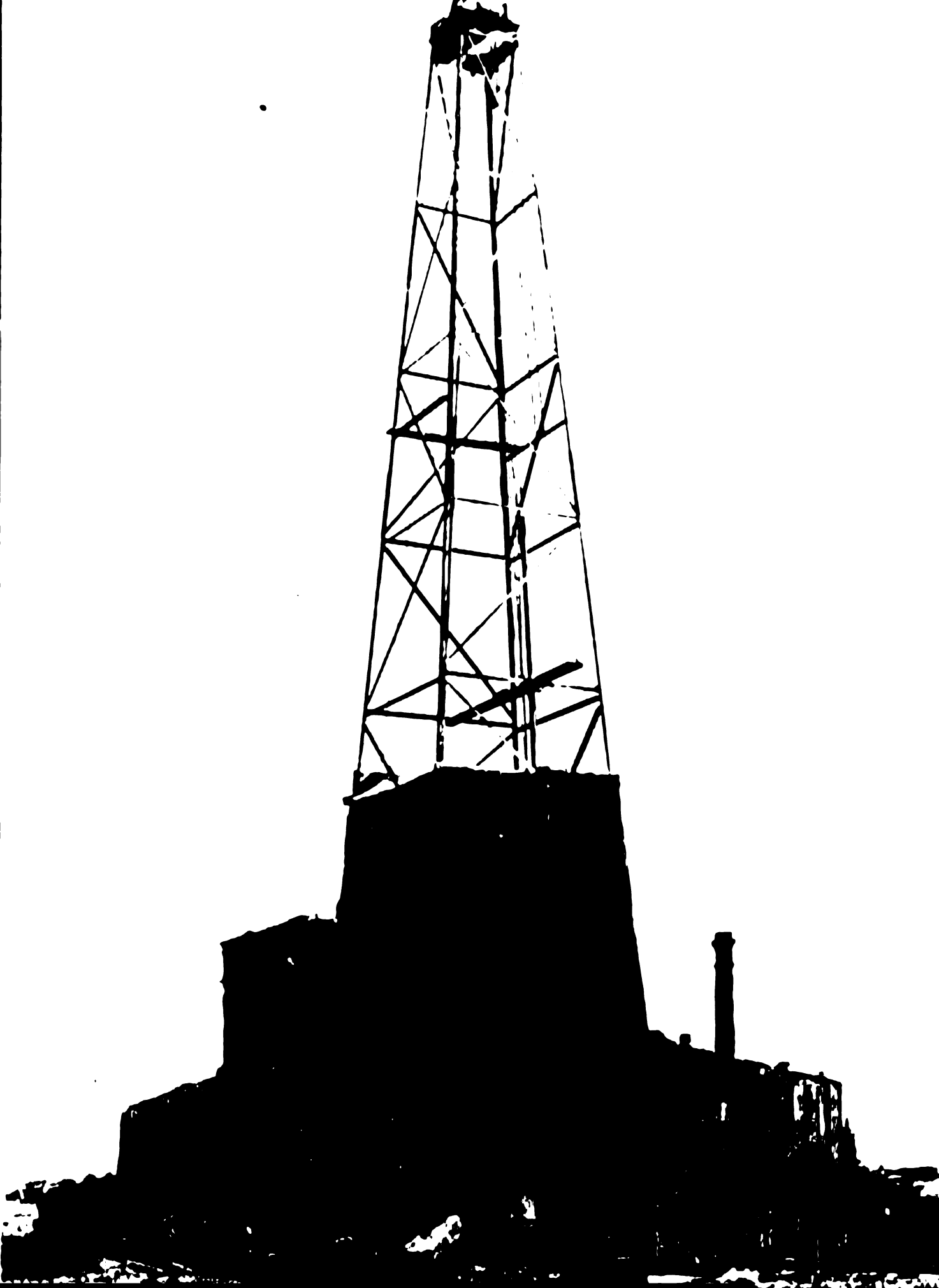

Mines statement

New Zealand. Mines Dept

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NEW ZEALAND.

PAPERS AND REPORTS

RELATING TO

MINERALS AND MINING

COMPRISING

STATEMENT BY THE MINISTER OF MINES.
REPORT ON THE GOLDFIELDS.
REPORT ON COAL-MINES.
STATE COAL-MINES.

WELLINGTON.
BY AUTHORITY: JOHN MACKAY, GOVERNMENT PRINTER.
1905.

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1905.

NEW ZEALAND.

MINES STATEMENT.

BY THE HON. JAMES McGOWAN, MINISTER OF MINES.

MR. SPEAKER,—

In presenting my annual Statement to Parliament I have to record a falling-off as regards the production of precious metals and kauri-gum during the year 1904, as compared with the previous year (1903), when the production of gold was greater than it had ever been since 1871, the highest recorded export of gold from the colony being made in that year. It is, however, worthy of note that the gold-export for 1904 exceeded that of 1902 by upwards of £36,000 and had not the condition of the rivers in Otago militated against gold-dredging being conducted to the best advantage, the production of gold for last year would undoubtedly have been greater.

The output of coal and other minerals has increased. The increase in the case of coal is very considerable, and, as will be seen in the remarks dealing with the coal-mining industry, is actually more than double as compared with the increase recorded for the year previous.

MINERAL PRODUCTION.

The annexed Table No. 1 shows the quantity and value of gold, silver, and other minerals (including kauri-gum) exported during the year ending the 31st December, 1904, and also the quantity of native coal consumed in the colony during the same period. The amount of gold entered for export was 520,323 oz., valued at £1,987,501, and of silver, 1,094,461 oz., valued at £112,875, making a total value of gold and silver amounting to £2,100,376, this being a decrease of £28,952 as compared with the export returns for the previous year.

Other minerals, including coal, lignite, and kauri-gum, represent a value of £1,338,858, or a decrease of £62,468 as compared with that of the previous year.

The quantities and values of the chief mineral products for the past two years are summarised for comparison as follow :—

Product.	Year ending 31st December, 1904. Quantity.	Value. £	Year ending 31st December, 1903. Quantity.	Value. £
Gold	520,323 oz.	1,987,501	533,314 oz.	2,037,831
Silver	1,094,461 "	112,875	911,914 "	91,497
Copper-ore	...	...	6 tons	123
Manganese-ore	196 tons	570	70 "	210
Mixed minerals	1,404 "	10,168	625 "	7,014
Colonial coal exported, including that used by Home steamers	165,220 "	139,898	152,332 "	128,927
Hæmatite...	7 "	96	...	1
Colonial coal consumed in New Zealand	1,372,618 "	686,309	1,267,861 "	633,931
Kauri-gum	9,203 "	501,817	9,357 "	631,102
Shale (treated in New Zealand)	...	...	36 "	18
Total value of production for 1903				£3,530,654
" " 1904				3,439,234
Total decrease				£91,420

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The total value of gold, silver, coal, and other minerals (including kauri-gum), produced up to the 31st December, 1904, was £89,252,474.

From the following table (which is compiled from returns by the Customs) it will be seen that for the six months ending the 30th June, 1905, there is a decrease in the value of gold and silver exported as compared with the corresponding period of the previous year.

COMPARATIVE STATEMENT of GOLD and SILVER entered for EXPORT during the First Half of the Years 1904 and 1905.

—	Half-year ending 30th June, 1904.		Half-year ending 30th June, 1905.		Difference for First Half of 1905.	
	Quantity	Value.	Quantity.	Value.	Quantity.	Value.
	Oz.	£	Oz.	£	Oz.	£
Gold	267,305	1,024,082	250,617	1,011,323	16,688	12,759
Silver	522,335	54,149	537,310	55,418	14,975	1,269
	789,640	1,078,231	787,927	1,066,741	Decreased value £11,490	

GOLD EXPORT.

The quantity of gold entered for exportation through the Customs for the year 1904 was as follows: Auckland, 223,010 oz.; Marlborough, 473 oz.; Nelson, 5,049 oz.; West Coast, 122,310 oz.; Otago and Southland, 169,478 oz.: total, 520,320 oz., valued at £1,987,501.

GOLD-MINING.

QUARTZ.

The winning of gold from quartz reefs is carried on in various parts of the colony, the chief centres of this branch of the mining industry being the Ohinemuri, Thames, and Coromandel Counties in the North Island, and the Inangahua County in the Middle Island.

Taking the Northern Goldfields, it may be said that the production of gold is greatest in the Ohinemuri County, in which the extensive mines of the Waihi Gold-mining Company, as well as those of other companies at Karangahake and Komata are situated. The output from the Waihi Gold-mining Company's mines for the year 1904 was 259,978 tons of quartz, from which bullion to the value of £673,101 18s. 4d. was obtained. The several mills are provided with modern plant for the extraction of gold and silver from the ore, the actual crushing-power being 330 heads of stamps. Over 1,200 persons are employed, and dividends amounting to £297,544 4s. were paid during the year. It is very satisfactory to note that the ore-bodies continue to maintain their characteristic sizes at the lowest levels yet sunk to, and give promise of yielding a very large output for several years to come. At the adjoining property of the Waihi Grand Junction Gold-mining Company preparations are being made for the output and treatment of quartz, a modern mill comprising a forty-stamp battery with cyanide plant being in course of erection. This is an indication that in the near future an increase in the amount of bullion produced at Waihi may be looked for. Active work has also been in progress during the year with a view to proving the continuation of the reef-system beyond the Waihi Grand Junction Company's holding, and also for the purpose of testing the ground near Waihi Beach. For the purpose of treating accumulations of tailings in the bed of the Ohinemuri River, a plant has been erected near Waihi. For some time operations were necessarily of an experimental character, and have, it is understood, been so satisfactory as to warrant the extension of the present plant, and the proposal to erect one of much larger capacity lower down the river.

Mining at Karangahake is now carried on by the New Zealand Crown Mines (Limited) and the Talisman Consolidated (Limited), the latter company having taken over the Woodstock Mine at which active operations by the former proprietary ceased early last year. The acquisition of the Woodstock property will facilitate very materially the working of the Talisman Mine at lower levels. Some 430 persons are employed by the two companies named, and bullion to the value of £137,468 was obtained during the year

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At Waitekauri only a limited amount of productive mining was done during the year, about forty persons being employed in all classes of work on the several properties in this locality.

Prospecting on the Waitekauri Gold-mining Company's property has not resulted in any fresh discoveries being made.

The Komata reefs—which give employment to one hundred persons—have been successfully worked, and good dividends earned.

Mr. Hardy's mines at Waiorongomai, near Te Aroha, Piako County, have been taken over by a company. For a considerable portion of the year the properties were non-productive in consequence of alterations to, and extensions of, the plant being carried out.

In the Thames County the principal new work has been at the Golden Belt Mine, Neavesville, where a low-level adit was in course of driving during the year, and a battery of forty heads of stamps with cyanide plant was also being erected. The Tairua-Broken Hills Mine has not maintained the steady output which characterised previous operations, the output and relative value of the ore having decreased. During the latter part of the year work was commenced with a view to opening up the mine at a lower level. With the exception of the discovery (made near the end of 1904) of some good gold-bearing stone at the Waiotahi Mine, there is little change to note as regards the industry at the Lower Thames. Mining is being carried out at a number of properties, none of which are worked on a large scale. Boring operations, which were conducted with the object of prospecting at greater depth than has been reached by any of the shafts hitherto sunk, have not given the satisfaction which was anticipated. This was owing in a great measure to a succession of mishaps, and the question of the existence or otherwise of payable reefs at considerable depth has yet to be settled. Shaft-sinking and extensive crosscutting will, in all probability, be necessary to effect this.

The pumping plant at the Queen of Beauty shaft, Thames, which was in the first instance subsidised and finally secured by the Government, was, after standing for a period of some three years, overhauled and put to a working test under the direction of the Inspecting Engineer to the Mines Department in October last. Subsequently an arrangement was entered into with the Thames Drainage Board for the working of this plant for the drainage of the field hitherto effected by the old Big Pump.

Mining in the Coromandel County during the year 1904 was much the same as during the preceding year; work was conducted on a comparatively small scale at a number of claims, the Royal Oak of Hauraki Mine, at Tokatea, employing the largest number of persons. A somewhat serious drawback to the mining industry exists in connection with the drainage of mines near the lower township, work at levels below that at which natural drainage can be effected having been suspended in consequence of owners of adjacent properties failing to agree as to the proportionate costs of pumping which each should bear. It has been suggested that a consolidation of interests would probably afford the most practical solution of the difficulty, and enable the mines to be worked more economically. A proposal has been made to the Department relative to prospecting the Tokatea Big Reef, and a subsidy at the rate of pound for pound up to £300 promised for this purpose. At Kuaotunu the Waitaia Mine is the principal producer. Other properties in the locality are also worked, but only on a very small scale. Two small mines are also worked in the neighbourhood of Gumtown.

In the Middle Island quartz-mining has been successfully carried on in the West Coast Inspection District. In the neighbourhood of Reefton (Inangahua County) gold to the value of over £200,000 has been won during the year by the registered companies operating in the locality. Mining is also carried on by private parties in various places in the County, the mines being mostly on a small scale. In Buller County quartz-mines are being worked near Lyell and Westport. also at Taitapu (Collingwood County).

Some attention has recently been directed to the quartz reefs near the head of the Wilberforce River on the dividing-range between Canterbury and Westland, and, although the discovery of a reef of considerable size has been reported, there is not as yet sufficient information available to warrant any statement as to the probable extent of this hitherto unworked field.

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In Marlborough the only work done during the year so far as quartz-mining is concerned was at Top Valley, near Blenheim, operations being practically confined to the driving of a low-level tunnel to enable the lodes to be worked to greater advantage.

The Otago Mining District is more largely productive of alluvial gold than that won from reef-mining, but gold is obtained from the working of quartz reefs in the Nenthorn, Barewood, and Wakatipu sub-districts, although none of the mines are at present conducted on a large scale. There appears little doubt that the existing facilities for working auriferous alluvial deposits without very great capital cost have militated, to some extent at least, against the more extensive development of quartz reefs in the Otago goldfields, and it is only a matter of time when the question of reef-mining must be more fully recognised than is at present the case.

Hydraulic and Alluvial Mining.

This branch of the gold-mining industry is carried on in the several goldfields of the Middle Island, and is well established. There have not been any new developments of material importance during the year but the work, as a whole, may be said to give steady and remunerative employment to a considerable section of the mining community. It is, however, to be noted that year by year auriferous alluvial deposits in various parts of the Island are getting worked out, and, as a natural consequence, the yield of alluvial gold must gradually decrease unless other areas of gold-bearing country are discovered and opened up. In some known instances payably auriferous ground exists, but so far has not been systematically worked owing to the scarcity of water locally for sluicing purposes, although supplies are feasible by the expenditure of capital in the construction of water-races, dams, &c.

During the last few years the extension of hydraulic-mining methods has been somewhat neglected in consequence of the adaptability of dredges for working on alluvial flats. Experience has, however, proved that under certain conditions the hydraulic system of mining is preferable to dredging, and in a few cases it has been found necessary to revert to the former method.

Dredge Mining.

The number of dredges at work at the end of the year 1904 was 186, a decrease of about fifteen as compared with the number in commission at the corresponding period of the preceding year. The reduction in the number is mainly due to the fact that during some four years immediately preceding, a large number of dredges were placed on claims either unsuitable for dredging, owing to their natural features, or too poor to admit of the machines being profitably worked. As a natural result the industry is now being worked on commercial rather than speculative lines, and although there is very little probability of the number of working dredges being increased, this branch of alluvial mining will continue to add to the colony's production of gold for some years to come.

The experiment of tree-planting (referred to in my Statement of last year as having been instituted in Southland) on a river-flat area which has been dredged appears to have been very successful, and a suggestion has been made* that where swamp lands have been turned over by dredges the cultivation of native flax might be advantageously adopted.

PROSPECTING.

The sum of £2,569 11s. 8d. was expended in subsidies for the year ending the 31st March, 1905, to prospecting associations and parties of miners actually engaged in prospecting.

THE CYANIDE PROCESS OF GOLD-EXTRACTION.

The royalty obtained by Government in respect to the purchase rights of this invention now amounts to £9,356, or practically 93½ per cent. of the sum originally paid. The balance will, in the natural course of events, be received during the present year, and thereupon all further royalty charges for the use of the cyanide process in New Zealand will cease.

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* See report of Inspecting Engineer, page 16.

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WATERCOURSES FOR TAILINGS, ETC.

The sum of £1,880 8s. 5d. was paid during the year as compensation to land-owners in respect to rivers and streams which have been proclaimed as watercourses into which tailings and mining *débris* may be discharged.

SCHOOLS OF MINES.

The various schools of mines continue to prove valuable institutions for the education of mining and metallurgical students, several of whom qualify, year by year, for responsible positions in connection with the working of mines and reduction-works.

Including the grants made to the School of Mines in connection with the Otago University at Dunedin, the expenditure on behalf of schools of mines in the colony during the last year was £2,381 5s. 5d.

COAL-MINING.

A very marked increase in the production of coal and lignite is recorded for the past year, the total output being 1,537,838 tons, as compared with 1,420,229 tons produced during the year 1903. The increase for the year 1904 was 117,609 tons as against that of 55,189 tons recorded for the previous year, the output of the several districts being shown in the following table of comparisons.

COMPARATIVE STATEMENT of COAL and LIGNITE raised during the Years 1903 and 1904.

—	Output for 1903.	Increase for 1903 over 1902.	Output for 1904.	Increase for 1904 over 1903.
	Tons.	Tons.	Tons.	Tons.
Northern District	209,795	17,750	242,517	32,722
West Coast District	781,032	27,216	836,950	55,918
Southern District	429,402	10,223	458,371	28,969
Totals	1,420,229	55,189	1,537,838	117,609

The comparative tonnage of the various classes of coal, &c., for the years 1903 and 1904 is summarised as follows :—

Class of Coal, &c.	Output for 1903.	Output for 1904.	Increase for 1904.
	Tons.	Tons.	Tons.
Bituminous and semi-bituminous coal ...	879,891	938,518	58,627
Pitch-coal	21,116	24,506	3,390
Brown coal	441,814	483,858	42,044
Lignite	77,408*	90,956	13,548
Totals	1,420,229	1,537,838	117,609

* Including 36 tons of oil-shale.

The total recorded output of the various classes of coal, lignite, and oil-shale is now upwards of twenty millions of tons.

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The following statement shows the production for the year 1904 by the principal coal-mine owners or lessees (*i.e.*, those having an output of upwards of 10,000 tons):—

Name of Producers.	Locality.	Output for 1904.	Inspection District.
		Tons.	
Westport Coal Company (Limited) ...	Westport	534,008	West Coast.
New Zealand Coal and Oil Company (Limited)	Kaitangata	119,094	Southern.
Taupiri Coal-mines (Limited)	Huntly	116,461	Northern.
New Zealand State Coal-mines	Seddonville (Westport) and Greymouth	94,063	West Coast.
Blackball Coal Company (Limited) ...	Blackball (Greymouth) ...	85,528	"
Greymouth-Point Elizabeth Railway and Coal Company (Limited)	Brunner (Greymouth) ...	54,939	"
Hikurangi Coal Company (Limited) ...	Hikurangi (Whangarei) ...	44,974	Northern.
Nightcaps Coal Company (Limited) ...	Nightcaps (Invercargill) ...	43,118	Southern.
Tyneside Proprietary (Limited)	Brunner (Greymouth) ...	38,406	West Coast.
Northern Collieries Company (Limited) ...	Hikurangi (Whangarei) ...	25,719	Northern.
Allandale Coal Company (Limited) ...	Shag Point (Palmerston South)	21,604	Southern.
Christie Bros.	Saddle Hill (Mosgiel) ...	21,284	"
Taratu-Kaitangata Railway and Coal Company (Limited)	Kaitangata	20,293	"
Lovell's Flat Coal Company	"	19,414	"
Freeman's Coal Company	Abbotsford (Green Island)	17,210	"
Lowden and Howarth (Jubilee)	Fairfield (Green Island) ...	17,187	"
Union Collieries Company (Limited) ...	Mercer	15,342	Northern.
Ngunguru Coal Company (Limited) ...	Kiripaka (Whangarei) ...	14,367	"
J. Dean	Glentunnel (Malvern Hills)	13,447	Southern.
Kiripaka Coal Company	Kiripaka (Whangarei) ...	12,604	Northern.
Puponga Gold and Coal-mining Company, New Zealand (Limited)	Puponga (Collingwood) ...	12,430	West Coast.
Alexandra Coal Company (Limited) ...	Alexandra South ...	11,069	Southern.
Cromwell and Bannockburn Collieries Company (Limited)	Bannockburn (Cromwell)	11,063	"
J. and J. Smyth	Gore	10,268	"

A very large number of small coal and lignite mines are worked in various parts of the colony purely for the supply of local requirements, the outputs of these varying from a few tons produced to meet the necessities of a farmer having a deposit of lignite on his own land up to nearly 10,000 tons per annum.

The total number of mines returned as having been at work during the year is 168, the average number of persons employed being 3,288. In comparison with the returns for the previous year it is to be noted that the number of mines worked shows a decrease of ten, but the number of persons employed is increased by 436. The decrease in the number of working mines is due to the stoppage of a few at which the output has been very limited.

It is pleasing to note that during the past few years there has been a very marked improvement in the ventilation of the underground workings of coal-mines in New Zealand, the old methods of natural ventilation, and ventilation by imperfect and inefficient furnaces having given place at the more important mines to a system of ventilation by mechanical methods whereby very much greater volumes of fresh air are being circulated through the mines. By this means the health of the workers is enhanced, and the atmospheric conditions under which they pursue their calling rendered much superior to those in which a great many operatives labour at workshops and factories.

New Zealand State Coal-mines.

Development-works were carried out at both Seddonville and Point Elizabeth Collieries during the year 1904, and coal from the last-named property was sent to the Port of Greymouth for shipment as soon as the railway-works were sufficiently advanced to permit of this being done. In common with all new undertakings of this character a considerable amount of necessary work has had to be undertaken at both collieries (since the coal was reached) for the purpose of opening out the seams sufficiently

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to enable a reasonable output to be procured, and in other arrangements for dealing with the coal on the surface as well as provision for effectively carrying on other work incidental to colliery operations. The production for the year was as follows: Seddonville Colliery, 33,808 tons; Point Elizabeth Colliery, 60,255 tons: total, 94 063 tons.

Mr. A. B. Lindop, the General Mining Manager, died suddenly in the early part of the year. He was succeeded by Mr. James Bisho .

Details as to the working of the State Coal-mines and the financial results attained will be found in the reports of the management and the balance-sheet respectively.

ACCIDENTS IN MINES.

It is pleasing to note that the number of accidents of a fatal character were fewer during the year 1904 than was the case during the year immediately preceding. The following statement shows the fatalities in each branch of mining-work:—

Class of Mining.	Number of Persons employed.	Fatalities during 1904.	Rate per 1,000.
Gold-mining—			
Quartz-mines	4,757	6	1·26
Hydraulic and alluvial mines	6,141	5	1·46
Dredges		4	
Coal-mines	3,228	4	1·23
	14,126	19	1·35

Each of the foregoing accidents, as well as others of a serious though non-fatal character, were duly inquired into by or on behalf of the Department, and it may be added that very careful investigation is made into the cause of every serious or fatal accident required by law to be reported to the Department.

KAURI-GUM.

The export of kauri-gum for the year was returned at 9,203 tons, having a value of £501,817, or an average value of £54 10s. 6½d. per ton. Compared with the returns for the year 1903 (when the highest output was reached and value obtained after the fall in demand and values obtained of four years ago) these figures denote a decrease of 154 tons in quantity and of £12 18s. 4¾d. per ton in value.

SCHEELITE.

The demand for this minera is increasing. Hitherto t has been prepared for the market almost, if not quite, exclusively by Messrs. Donaldson Bros., of Macrae's, Otago, but the demand being now more than they can supply, action is being taken by other mine-owners in the same locality with a view to meeting requirements.

Inquiries for scheelite containing a fairly high percentage of tungstic acid have reached the colony from England and elsewhere. It is evident that a ready market is available for a steady supply of this mineral.

HÆMATITE PAINT.

Paint is still manufactured at Thames and Parapara from hæmatite, and the mineral is also obtained at Mataura (Southland), where it is used at the local paper-mills for colouring purposes.

IRON.

The lease for working the deposits of iron-ore at Parapara referred to in the Statement of last year has been executed and a deposit of £1,000 lodged with the Public Trustee as a guarantee that the conditions of the lease will be carried out. As it is provided in the lease that this deposit shall be forfeited unless the sum of £1,000 is expended within the first year of the term in mining operations, with further provision for expenditure up to £50,000, it may reasonably be expected that active operations for working the deposits of iron-ore at Parapara will be commenced at an early date.

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ROCK PHOSPHATE.

This material is being quarried near Milton, Otago, the output for 1904 being 2,678 tons. It is calcined near the quarries, and subsequently treated at Burnside Chemical Works, Dunedin, prior to its being sold for fertilising purposes.

PETROLEUM.

Boring has been in progress at Moturoa, near New Plymouth, and oil was recently met with at a depth of nearly 2,300 ft. below the surface. It is premature as yet to make any statement as to the probable quantity of oil available, but from present appearances it is quite likely that the success which has lately been attained may lead to the development of a new industry in this colony.

COPPER.

Comprehensive prospecting operations have been in progress in the vicinity of Nelson, the results, according to latest accounts, being of a satisfactory character. Deposits of copper-ore are known to exist in other parts of the colony, and a syndicate has been formed with the object of testing those at Moko Creek, Lake Wakatipu.

OTHER MINERALS.

A small quantity of platinum is obtained at Round Hill, Southland.

Prospecting operations have been in progress for tin at Stewart Island; greenstone at Milford Sound; and marl (for cement-making) at Burnside, near Dunedin.

ROADS AND TRACKS.

The expenditure on roads and tracks during the financial year amounted to £26,112 4s. 2d., this being a decrease of £19,481 18s. 11d. as compared with the expenditure of the preceding year. The sum of £593 6s. 5d. was paid in subsidies to local bodies, and roads constructed by direct grants have absorbed £25,518 17s. 9d. During the past twenty-three years the sums expended in subsidies and grants amount to £591,631 3s. 10d.

DEPARTMENTAL.

The work of the Department has been carried out by the Head Office staff in Wellington, and by the Inspectors of Mines and other officers at various centres in a painstaking and satisfactory manner. The inspection of mines, is, I have every reason to believe, systematic and thorough, and as frequent as is either necessary or desirable. Over-inspection is as much to be deprecated as the opposite extreme. It is found that managers of mines are almost invariably willing to meet all reasonable requests of Inspectors of Mines in matters concerning the safety and well-being of persons employed.

Early in the present year the Geological Branch of the Mines Department was reorganised, Mr. J. M. Bell, Ph.D., F.R.G.S., being appointed Director of the Geological Survey. Dr. Bell has commenced a systematic geological survey of the colony, and has a staff of assistants acting under his supervision.

MINING BUREAU.

The publication of the *New Zealand Mines Record* has been continued during the past year by the Secretary of the Mining Bureau. The applications made by public institutions and mining and engineering societies in Great Britain, the United States, and other countries to be supplied with copies of the *Record* is evidence of its wide appreciation, whilst the references frequently made to the articles appearing in its columns in the mining and technical press show that mining matters in New Zealand are constantly brought under the notice of investors. Amongst the subjects dealt with of particular interest to the mining community in this colony may be mentioned the exhaustive reports as to the prevention of ankylostomiasis and phthisis amongst the miners in Cornwall and the Transvaal, and the suggestions made by competent authorities as to the best methods to be adopted for combating the dust from rock-drilling operations. All the available literature on these subjects has received the attention which their paramount importance warranted.

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No. 1.

TABLE showing COMPARISON in QUANTITY and VALUE of GOLD entered for EXPORTATION, also the QUANTITY and VALUE of other MINERALS for the Years ended the 31st December, 1903 and 1904, as well as the TOTAL VALUE since the 1st January, 1853.

Name of Metal or Mineral.	For Year ending the 31st December, 1903.		For Year ending the 31st December, 1904.		Total from the 1st January, 1853, to the 31st December, 1904.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Precious metals—	Oz.	£	Oz.	£	Oz.	£
Gold	533,314	2,037,831	520,323	1,987,501	16,626,144	65,136,648
Silver	911,914	91,497	1,094,461	112,875	5,308,513	657,153
Total gold and silver	1,445,228	2,129,328	1,614,784	2,100,376	21,932,657	65,793,801
Mineral produce, including kauri-gum—	Tons.	£	Tons.	£	Tons.	£
Copper-ore	6	123	..	..	1,417½	18,211
Chrome-ore	..	..	..	..	5,869	38,002
Antimony-ore	..	..	..	..	3,643	52,598
Manganese-ore	70	210	196	570	19,277½	61,626
Hæmatite-ore	..	1	7	96	76½	439
Mixed minerals	625	7,014	1,404	10,168	24,277	132,295
Coal (New Zealand) exported	152,332	128,927	165,220	139,898	1,899,390	1,755,591
Coke exported	..	..	..	..	16,370	24,804
Coal, output of mines in colony (less exports)	1,267,861	633,931	1,372,618	686,309	18,201,851	9,008,809
Shale	36	18	..	..	14,422	7,211
Kauri-gum	9,357	631,102	9,203	501,817	255,282	12,359,087
Total quantity and value of minerals	1,430,287	1,401,326	1,548,648	1,338,858	20,441,875½	23,458,673
Value of gold and silver, as above ..	..	2,129,328	..	2,100,376	..	65,793,801
Total value of minerals, including gold and silver	..	3,530,654	..	3,439,234	..	89,252,474

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No. 2.

TABLE showing the QUANTITY and VALUE of GOLD entered for EXPORTATION from NEW ZEALAND for the Years ended the 31st December, 1904 and 1903, and the TOTAL QUANTITY and VALUE from 1857 to the 31st December, 1904.

District and County or Borough.	Year ending 31st December, 1904.		Year ending 31st December, 1903.		Increase or Decrease for Year ending 31st December, 1904.		Total Quantity and Value from January, 1857, to 31st December, 1904	
	Quantity.	Value.	Quantity.	Value.	Increase.	Decrease.		
AUCKLAND—	Oz.	£	Oz.	£	Oz.	Oz.	Oz.	£
County of Coromandel ..	2,910	12,223	9,689	40,722	..	6,779	..	..
County of Thames ..	5,437	21,785	9,781	39,490	..	4,344	..	..
County of Ohinemuri ..	44,314	156,139	54,449	194,800	..	10,135	..	..
County of Piako	189	776	1,117	4,708	..	928	..	..
County of Manukau ..	..	..	..	..	..	..	..	..
County of Marsden ..	..	..	..	..	..	..	..	..
County of Whangarei ..	..	..	3	10	..	3	..	..
Borough of Thames ..	2,009	8,008	3,571	14,788	..	1,562	..	..
Te Aroha Town District ..	3	10	1	4	2	..	..	..
Great Barrier Island ..	210	727	26	91	184	..	..	..
County of Tauranga ..	..	..	3	12	..	3	..	..
Borough of Waihi ..	167,938	591,861	154,041	537,709	13,897	..	..	..
	223,010	791,529	232,681	832,334	..	9,671	3,464,706	12,858,706
WELLINGTON	..	..	..	..	..	..	188	706
MARLBOROUGH—								
County of Marlborough ..	473	1,890	972	3,845	..	499	89,099	347,214
NELSON—								
County of Waimea County of Collingwood }	5,049	20,141	7,962	31,710	..	2,913	..	..
	5,049	20,141	7,962	31,710	..	2,913	1,705,166	6,759,859
WEST COAST—								
County of Buller	10,533	42,125	12,696	50,798	..	2,163	..	..
County of Inangahua ..	62,716	250,825	59,288	237,151	3,428	..	..	..
County of Grey	33,007	132,023	33,239	132,990	..	232	..	..
County of Westland ..	14,373	57,479	17,066	68,346	..	2,693	..	..
Kumara Borough	..	..	..	..	..	..	..	..
Hokitika Borough ..	67	271	209	836	..	142	..	..
Ross Borough	1,614	6,454	2,743	10,969	..	1,129	..	..
	122,310	489,177	125,241	501,090	..	2,931	5,023,225	19,993,821
CANTERBURY—								
County of Ashburton ..	..	..	..	..	..	..	99	387
OTAGO—								
County of Taieri	1,813	7,311	3,159	12,728	..	1,846	..	..
County of Tuapeka ..	39,820	161,139	46,544	187,949	..	6,724	..	..
County of Vincent ..	62,098	250,979	57,620	229,410	4,478	..	..	..
County of Maniototo ..	7,031	28,260	8,132	32,715	..	1,101	..	..
County of Waihemo ..	2,563	10,370	4,027	16,323	..	1,464	..	..
County of Waikouaiti ..	..	..	..	..	..	..	..	..
County of Waitaki ..	2,618	10,531	2,024	8,114	594	..	..	..
County of Bruce	949	3,815	688	2,759	261	..	..	..
County of Lake	5,832	23,571	7,053	28,565	..	1,221	..	..
County of Wallace ..	8,405	33,869	7,495	30,205	910	..	..	..
County of Fiord	319	1,279	515	2,067	..	196	..	..
County of Southland ..	38,020	153,600	28,952	117,019	9,068	..	..	..
County of Clutha	10	40	249	998	..	239	..	..
Borough of Alexandra ..	..	..	..	..	..	..	..	..
Dunedin	..	..	..	..	..	..	..	..
Borough of Mataura ..	..	..	..	..	..	..	..	..
	169,478	684,764	166,458	668,852	3,020	..	6,348,451	25,175,131
Unknown	..	..	..	..	..	..	207	824
Totals	520,320	1,987,501	533,314	2,037,831	..	12,994	16,626,141	65,136,648

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No. 3.

TABLE showing the TOTAL QUANTITY and VALUE of GOLD entered for DUTY for EXPORTATION from the 1st January, 1857, to the 31st December, 1904. (This Return shows the Output of the various Goldfields. Gold entered at Nelson from Hokitika, Greymouth, and Westport is put under the Head of "West Coast," and Gold from Invercargill and Riverton under the Head of "Otago.")

Year.	Auckland.		Nelson.		Marlborough.		West Coast.		Otago.		Wellington.		Canterbury.		Grand Totals.	
	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.
		£		£		£		£		£		£		£		£
1857 ..	..	..	10,437	40,422	..	..	..	..	..	..	..	..	..	..	10,347	40,422
1858 ..	308	1,192	13,226	51,272	..	..	..	..	..	..	..	..	..	..	13,534	52,464
1859 ..	..	..	7,336	28,427	..	..	..	..	..	..	..	..	..	..	7,336	28,427
1860 ..	..	..	4,538	17,585	..	..	..	..	..	..	..	..	..	..	4,538	17,585
1861 ..	..	..	6,335	24,552	..	..	..	..	187,696	727,321	..	..	..	..	194,031	751,873
1862 ..	1,239	4,098	10,422	40,386	..	..	..	..	399,201	1,546,905	..	..	..	..	410,862	1,591,389
1863 ..	4,483	13,853	9,580	37,120	..	..	..	..	614,387	2,380,750	..	..	..	..	628,450	2,431,723
1864 ..	3,448	10,552	14,410	55,841	24,838	95,231	1,463	5,560	436,012	1,689,653	..	..	..	..	480,171	1,856,837
1865 ..	5,449	17,096	12,137	47,080	7,952	30,814	289,897	1,127,370	259,139	1,004,163	..	..	..	..	574,574	2,226,474
1866 ..	5,814	17,463	7,650	29,643	469	1,818	552,572	2,140,946	168,871	654,647	..	..	..	..	735,376	2,844,517
1867 ..	6,637	18,277	9,123	35,918	501	1,978	511,974	2,018,874	158,670	623,815	..	..	..	..	686,905	2,698,862
1868 ..	53,660	168,874	5,999	38,396	404	1,616	405,762	1,608,844	171,649	686,596	..	..	..	..	637,474	2,504,326
1869 ..	132,451	434,687	10,631	42,524	666	2,664	317,169	1,269,664	153,364	613,456	..	..	..	..	614,281	2,362,995
1870 ..	85,534	319,146	12,244	48,692	1,852	7,408	280,068	1,121,525	165,152	660,694	30	120	..	..	544,880	2,157,585
1871 ..	330,326	1,188,708	10,014	40,056	1,867	7,468	232,882	931,528	154,940	619,760	..	..	..	..	730,029	2,787,520
1872 ..	104,890	369,341	8,175	32,700	2,057	8,228	172,574	690,296	157,574	630,696	..	..	..	..	445,370	1,731,261
1873 ..	119,449	437,123	13,697	54,786	1,274	5,050	188,501	756,442	182,416	734,024	..	..	..	..	505,337	1,987,425
1874 ..	76,910	305,068	5,642	22,158	1,198	4,748	157,531	631,203	135,107	542,154	..	..	..	..	376,388	1,505,331
1875 ..	69,485	262,156	4,577	17,866	1,159	4,636	158,678	635,480	121,423	487,632	..	..	..	..	355,322	1,407,770
1876 ..	56,057	221,905	14,018	55,862	450	1,796	133,014	531,274	118,477	473,491	..	..	..	..	322,016	1,284,328
1877 ..	99,081	403,627	5,367	21,092	870	3,197	153,198	612,823	113,169	455,341	..	..	..	..	371,685	1,496,080
1878 ..	55,982	220,454	4,463	17,223	404	1,617	144,634	578,508	105,003	422,277	..	..	..	..	310,486	1,240,079
1879 ..	37,901	154,295	2,993	11,424	879	3,460	142,822	571,061	102,869	407,868	..	..	..	..	287,464	1,148,108
1880 ..	42,720	176,416	3,222	12,223	1,550	5,650	144,090	575,258	113,666	457,705	..	..	..	..	305,248	1,227,252
1881 ..	35,516	141,326	3,453	13,039	1,378	4,531	127,544	509,971	102,670	411,923	..	..	..	..	270,561	1,080,790
1882 ..	33,059	131,007	3,289	12,494	1,352	5,400	130,048	519,978	83,446	333,804	10	37	..	..	251,204	1,002,720
1883 ..	41,291	163,618	2,064	7,724	636	2,524	116,905	467,152	87,478	352,384	..	..	..	..	248,374	993,352
1884 ..	36,087	143,564	2,159	8,002	1,079	4,306	111,686	446,517	78,810	318,932	101	380	24	96	229,946	921,797
1885 ..	42,989	170,416	2,798	10,387	540	2,160	117,861	471,325	73,183	294,378	..	..	..	..	237,371	948,615
1886 ..	32,271	128,140	2,582	9,979	404	1,451	112,671	446,287	79,104	317,543	47	169	..	..	227,079	903,569
1887 ..	30,697	121,564	2,914	10,829	1,041	3,759	98,774	395,430	70,443	279,518	..	..	..	..	203,869	811,100
1888 ..	35,228	139,556	3,027	11,320	699	2,547	100,139	400,405	62,107	247,142	..	..	24	96	201,219	801,066
1889 ..	28,655	113,191	3,252	12,310	5,189	20,167	101,696	406,451	64,419	256,430	..	..	..	..	203,211	808,549
1890 ..	31,745	125,760	2,856	11,049	6,073	24,285	89,096	356,368	63,423	255,976	..	..	..	..	193,193	773,438
1891 ..	45,392	181,185	4,445	16,896	5,649	22,576	109,268	437,126	87,209	349,573	33	132	..	..	251,996	1,007,488
1892 ..	45,555	183,655	2,535	9,604	3,898	15,429	103,106	412,383	82,933	333,467	52	206	..	..	238,079	954,744
1893 ..	45,714	186,553	2,145	8,187	2,165	8,644	99,127	396,516	77,660	313,238	..	..	..	..	226,811	913,138
1894 ..	52,916	211,974	2,860	10,634	2,586	10,123	86,950	347,464	76,353	307,644	..	..	..	..	221,615	887,839
1895 ..	111,213	430,862	2,460	9,016	2,695	10,771	89,429	357,719	87,694	353,796	..	..	..	..	293,491	1,162,164
1896 ..	92,346	350,355	2,758	10,333	916	3,588	79,317	317,161	88,362	359,991	..	..	..	..	263,694	1,041,428
1897 ..	105,477	392,337	1,892	7,055	810	3,195	58,817	235,430	84,649	342,187	..	..	..	..	251,645	980,204
1898 ..	142,383	527,786	1,720	6,882	781	3,003	79,948	319,789	55,343	223,231	..	..	..	..	280,175	1,080,691
1899 ..	168,769	624,737	419	1,571	..	..	90,031	360,149	130,311	526,605	..	..	28	111	389,558	1,513,173
1900 ..	166,342	605,398	3,718	14,605	535	2,147	73,923	295,733	129,075	521,629	..	..	23	90	373,616	1,439,602
1901 ..	191,968	695,551	7,212	28,138	133	513	113,286	454,006	142,940	575,492	..	..	22	83	455,561	1,753,783
1902 ..	201,583	721,977	5,947	23,649	601	2,404	118,796	475,272	181,116	728,124	..	..	2	7	508,045	1,951,433
1903 ..	232,681	832,334	7,962	31,710	972	3,845	125,241	501,090	166,458	668,852	..	..	..	..	533,314	2,037,831
1904 ..	223,010	791,529	5,049	20,141	473	1,890	122,310	489,177	169,478	684,764	..	..	..	..	520,323	1,987,501
Totals ..	3,464,706	12,858,706	285,747	1,128,702	88,945	346,637	6,442,798	25,625,555	6,343,549	25,175,521	273	1,044	123	483	16,626,144	65,136,648

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No. 4.

TABLE showing the TOTAL QUANTITY and VALUE of MINERAL ORES other than GOLD (the Product of New Zealand Mines), COAL, COKE, and KAURI-GUM, exported from the Colony up to the 31st December, 1904.

Year.	Silver.		Copper-ore.		Chrome-ore.		Antimony-ore.		Manganese-ore.		Hæmatite-ore.		Mixed Mineral Ores.*		Coal.†		Coke.		Kauri-gum.		Total.		
	Oz.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Oz.	Tons.	Value.
		£		£		£		£		£		£		£		£		£		£			£
1853 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	880	15,972	..	880	15,972
1854 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,661	28,864	..	1,661	28,864
1855 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	355	4,514	..	355	4,514
1856 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,440	18,591	..	1,440	18,591
1857 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,522	35,251	..	2,522	35,251
1858 ..	..	..	351	5,000	3	25	..	..	..	..	..	..	..	..	2	4	..	..	1,811	20,037	..	2,167	25,066
1859 ..	..	..	245	2,605	8	120	..	..	..	..	..	..	..	..	..	..	..	..	2,010	20,776	..	2,263	23,501
1860 ..	..	..	137	1,590	116	1,440	..	..	..	..	..	..	..	..	1	2	..	..	1,046	9,851	..	1,300	12,883
1861 ..	..	..	110	1,300	52	520	..	..	..	..	..	..	..	..	..	..	..	..	856	9,888	..	1,018	11,708
1862 ..	..	..	51	1,024	3,843	24,719	..	..	..	..	..	..	..	..	..	..	..	..	1,103	11,107	..	3,997	36,850
1863 ..	..	..	..	..	595	4,318	..	..	..	..	..	..	..	..	..	..	..	..	1,400	27,026	..	1,995	31,344
1864 ..	..	..	..	..	768	4,910	..	..	..	..	..	..	..	..	..	..	..	..	2,228	60,590	..	2,996	65,500
1865 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,867	46,060	..	1,867	46,060
1866 ..	..	..	..	..	281	1,315	..	..	..	..	..	..	..	..	261	400	..	..	2,535	70,572	..	3,077	72,287
1867 ..	..	..	246	2,700	..	..	..	..	..	..	..	..	..	..	973	1,228	..	..	2,685	77,491	..	3,904	81,419
1868 ..	..	..	84	977	..	..	..	..	..	..	..	..	..	..	1,027	1,210	..	..	2,690	72,493	..	3,801	74,680
1869 ..	11,063	2,993	..	..	..	..	..	..	..	..	..	..	..	..	750	800	..	..	2,850	111,307	11,063	3,600	115,100
1870 ..	37,123	11,380	7	120	..	..	..	..	..	..	..	..	..	..	1,672	1,508	..	..	4,391	175,074	37,123	6,070	188,082
1871 ..	80,272	23,145	..	..	..	..	..	..	..	..	..	..	..	..	1,696	1,612	..	..	5,054	167,958	80,272	6,750	192,715
1872 ..	37,064	9,910	..	..	..	..	..	..	..	..	..	..	..	..	990	855	21	50	4,811	154,167	37,064	5,882	164,982
1873 ..	36,187	9,850	..	..	..	..	..	..	..	..	..	..	..	..	724	655	..	..	2,834	85,816	36,187	3,558	96,321
1874 ..	40,566	10,380	..	..	..	..	..	..	..	..	..	..	..	..	1,468	1,363	87	228	2,569	79,986	40,566	4,119	91,957
1875 ..	29,085	7,569	..	..	..	..	..	..	..	..	..	..	..	..	3,385	3,129	15	51	3,231	138,523	29,085	6,631	149,272
1876 ..	12,688	3,171	..	..	..	..	..	..	..	..	..	..	3,180	14,824	1,854	1,954	58	189	2,888	109,234	12,688	7,975	129,372
1877 ..	33,893	7,556	..	..	..	..	..	..	..	..	..	..	2,366	9,664	2,658	2,071	25½	72	3,633	118,348	33,893	8,682½	137,711
1878 ..	23,019	5,755	6	115	..	..	4	102	2,516	10,416	..	..	2	8	6,362	5,139	85	177	3,445	132,975	23,019	12,120	154,687
1879 ..	20,645	4,512	55	1,105	..	..	..	..	2,140	8,338	..	..	..	..	7,144	6,187	154	324	3,229	147,535	20,645	12,722	168,001
1880 ..	20,005	4,500	..	..	..	..	60	612	2,611	10,423	..	..	2,674	11,335	7,020	5,977	87	135	4,725	242,817	20,005	17,177	275,799
1881 ..	18,885	4,236	5	36	..	..	2	24	1,271	3,283	..	..	1,955	4,303	6,621	5,610	223	353	5,461	253,778	18,885	15,538	271,623
1882 ..	5,694	1,286	9	41	..	..	30	900	2,181	6,963	..	..	2,784	8,597	3,207	2,380	275	480	5,533	260,369	5,694	14,019	281,016
1883 ..	16,826	3,785	46	678	..	..	31	804	384	1,155	0½	12	22	110	6,522	4,879	1,430	2,057	6,518	336,606	16,826	14,953½	350,086
1884 ..	24,914	5,125	20	106	..	..	..	..	318	809	..	..	..	..	6,104	4,461	296	372	6,393	342,151	24,914	13,071	353,024
1885 ..	16,624	3,169	..	..	..	..	666	5,289	602	1,716	50½	208	114	993	43,893	51,257	267	385	5,875½	299,762	16,624	51,468½	362,779
1886 ..	12,108	2,946	20	390	..	..	62	1,784	328½	1,316	..	..	445	1,846	46,136	52,133	497	715	4,920½	257,653	12,108	52,409½	318,783
1887 ..	20,809	3,453	..	..	..	..	134	3,989	305	895	..	..	144	4,142	44,129	44,650	183½	266	6,791	362,449	20,809	51,686½	419,844
1888 ..	403	71	2	75	..	..	376	6,246	1,085	2,404	..	..	162	2,955	68,087	64,971	953	1,646	8,482	380,933	403	79,147	459,301
1889 ..	24,105	4,043	..	..	..	..	493	5,319	1,080	2,569	..	..	199	9,985	86,405	84,347	2,132	3,407	7,519	329,590	21,105	97,828	439,260
1890 ..	32,637	6,162	..	..	..	..	515	11,121	482	1,004	1½	5	19	273	69,614	67,003	2,218	3,334	7,438	378,563	32,637	80,287½	467,465
1891 ..	28,023	5,151	0½	4	..	..	413	4,950	1,153	2,634	..	1	2	6	91,664	91,173	2,544	3,658	8,388	437,056	28,023	104,164½	544,633
1892 ..	22,053	3,996	..	..	..	..	364	4,900	521	1,239	..	..	84	631	78,911	80,225	4,906	5,691	8,705	517,678	22,053	92,891	614,360
1893 ..	63,076	9,743	..	..	..	..	331	3,467	319	943	..	..	37	650	69,136	72,699	51	53	8,317	510,775	63,076	78,191	598,330
1894 ..	54,177	6,697	..	..	..	..	44	761	534	1,156	..	..	25	353	75,004	73,438	107	160	8,338	404,567	54,177	84,052	487,132
1895 ..	85,024	10,679	..	..	..	..	54	1,486	210	525	..	..	62	880	85,987	83,342	288	715	7,425	418,766	85,024	94,026	516,393
1896 ..	94,307	10,589	..	..	..	..	21	450	65	205	..	..	37	1,335	79,524	71,984	105	263	7,126	431,323	94,307	86,878	516,149
1897 ..	183,892	20,872	..	2	..	..	10	157	180	541	..	..	1,561	5,892	76,073	69,595	..	..	6,641½	398,010	183,892	84,465½	495,069
1898 ..	293,851	33,107	2¼	70	..	..	..	..	217	703	..	..	1,828	4,792	56,332	50,381	9	14	9,905	586,767	293,751	68,253½	675,834
1899 ..	349,338	40,838	..	..	..	..	..	..	135	407	..	..	1,309	6,591	89,480	83,085	18	9	11,116	607,919	349,338	102,058	738,849
1900 ..	326,457	38,879	12	45	28	110	3	101	166	588	..	..	2,126	12,751	112,707	98,136	..	..	10,159	622,293	326,457	125,301	772,903
1901 ..	571,134	65,258	3	105	..	..	30	136	208	614	..	..	696	7,775	159,643	142,176	..	..	7,541	446,114	571,134	168,121	662,178
1902 ..	674,196	61,975	..	..	175	525	..	..	..	..	17	116	415	4,422	188,677	154,747	..	..	7,430	450,223	674,196	196,714	682,008
1903 ..	911,914	91,497	6	128	..	..	..	..	70	210	..	1	625	7,014	152,332	128,927	..	..	9,357	631,102	911,914	162,390	858,874
1904 ..	1,094,461	112,875	..	..	..	..	..	..	196	570	7	96	1,404	10,168	165,220	139,898	..	..	9,203	501,817	1,094,461	176,030	765,424
Totals	5,806,513	657,153	1,417½	18,211	5,869	38,002	3,643	52,598	19,277½	61,626	76½	439	24,277	132,295	1,899,390	1,755,591	16,370	24,804	255,282	12,359,087	5,806,513	2,225,602½	15,099,806

* "Mixed mineral ores" include sulphur, &c. Last year 36 tons of shale was mined at Orepuki.
† Total output of coal in colony (including export) approximately estimated at 16,677,835 tons, valued at £9,388,013.

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No. 5.

RETURN showing the QUANTITY and VALUE of COALS IMPORTED into NEW ZEALAND during the Quarter ended the 31st March, 1905.

Country whence imported.	Quantity.	Value.
	Tons.	£
New South Wales	146,615	137,427
Victoria	437	437
United Kingdom	142	226
United States of America	2	8
Totals	147,196	138,098

No. 6.

TABLE showing the INCREASE or DECREASE in the PRODUCTION of COAL in the Colony, and IMPORTED, Year by Year, during the last Twenty-seven Years.

Year.	Coal raised in the Colony.		Coal imported.		
	Tons.	Yearly Increase or Decrease.	Tons.	*Plus* or *Minus*.	Increase and Decrease.
1878	162,218	..	174,148	..	..
1879	231,218	69,000	158,076	−	16,072
1880	299,923	68,705	128,298	−	33,778
1881	337,262	37,339	129,962	+	6,664
1882	378,272	41,010	129,582	−	380
1883	421,764	43,492	123,540	-	6,042
1884	480,831	59,069	148,444	+	24,904
1885	511,063	30,232	130,202	−	18,242
1886	534,353	23,290	119,873	−	10,329
1887	558,620	24,267	107,230	−	12,643
1888	613,895	55,275	101,341	−	5,889
1889	586,445	27,450	128,063	+	26,722
1890	637,397	50,952	110,939	−	17,124
1891	668,794	31,397	125,318	+	14,379
1892	673,315	4,521	125,453	+	135
1893	691,548	18,233	117,444	−	8,009
1894	719,546	27,998	112,961	−	4,483
1895	726,654	7,108	108,198	−	4,763
1896	792,851	66,197	101,756	−	6,442
1897	840,713	47,862	110,907	+	9,151
1898	907,033	66,320	115,427	+	4,520
1899	975,234	68,201	99,655	−	15,772
1900	1,093,990	118,756	124,033	+	24,378
1901	1,239,686	145,696	149,764	+	25,731
1902	1,365,040	125,354	127,853	−	21,911
1903	1,420,229	55,189	163,923	+	36,070
1904	1,537,838	117,609	147,196	−	16,727

No. 7.

TABLE showing the OUTPUT of COAL from the various Mining Districts, and the Comparative INCREASE and DECREASE, for the Years 1903 and 1904, together with the TOTAL APPROXIMATE QUANTITY of COAL produced since the Mines were opened.

Name of District.	Output of Coal.		*Plus* or *Minus*.	Increase or Decrease.	Approximate Total Output of Coal up to 31st December, 1904.
	1903.	1904.			
	Tons.	Tons.		Tons.	Tons.
Kawakawa and Hikurangi	71,684	79,248	+	7,564	1,401,356
Whangarei, Kamo, Ngunguru, and Whauwhau	29,835	26,971	−	2,864	556,580
Waikato	95,556	116,676	+	21,120	1,555,027
Mokau	6,150	4,280	−	1,870	44,214
Miranda	6,570	15,342	+	8,772	25,835
Pelorus	..	..	..	..	711
West Wanganui	1,102	12,430	+	11,328	68,715
Westport	571,306	570,273	−	1,033	5,851,591
Reefton	10,133	15,119	+	4,986	124,308
Greymouth	198,441	239,128	+	40,687	3,737,451
Canterbury { Malvern	23,527	25,120	+	1,593	467,576
Canterbury { Timaru	..	..	..	..	10,657
Otago	307,562	320,681	+	13,119	5,299,212
Southland	98,313	112,570	+	14,257	972,430
Totals	1,420,229	1,537,838	+	117,609	20,115,663

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No. 8.

TABLE showing the DIFFERENT CLASSES of COAL from the MINES in the COLONY.

Name of Coal.	Output of Coal.		Increase.	Approximate Total Output of Coal up to the 31st December, 1904.
	1903.	1904.		
	Tons.	Tons.	Tons.	Tons.
Bituminous and semi-bituminous ..	879,891	938,518	58,627	11,365,232
Pitch	21,116	24,506	3,390	1,883,578
Brown	441,814	483,858	42,044	6,076,943
Lignite	77,372	90,956	13,584	775,488
Shale	36	..	36*	14,422
Totals	1,420,229	1,537,838	117,609	20,115,663

* Decrease.

No. 9.

TABLE showing the NUMBER of COAL-MINES in OPERATION, the NUMBER of MEN EMPLOYED, and the OUTPUT of COAL per MAN.

Number of Mines working.	Number of Men employed at each Mine.	Total Number of Men employed.	Output of Coal during 1904.	Average Output per Man.
			Tons.	Tons.
99	1 to 4 in each	180	79,762	443
35	5 to 10 "	230	120,818	525
10	11 to 20 "	158	68,654	435
24	21 and upwards	2,720	1,268,604	466
168		3,288	1,537,838	467

No. 10.

RETURN showing the QUANTITY and VALUE of COAL IMPORTED INTO and EXPORTED FROM NEW ZEALAND during the Year ended the 31st December, 1904.

Imported.			Exported.		
Countries whence imported.	Quantity.	Value.	Countries to which exported.	Quantity.	Value.
	Tons.	£		Tons.	£
United Kingdom	142	226	United Kingdom	91,933	87,022
New South Wales	146,615	137,427	New South Wales ..	23,275	19,962
Victoria	437	437	United States of America—		
United States of America ..	2	3	On the West Coast ..	1,384	1,779
			Fiji Islands	5,197	3,474
			South Sea Islands ..	7,349	4,186
			Hongkong	33,075	21,497
			Tasmania	3,347	2,176
Totals	147,196	138,093	Totals	165,560	140,096

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No. 11.

NUMBER of MINERS EMPLOYED during the Years ended 31st December, 1903 and 1904.

District.	Alluvial Miners.		Quartz-miners.		Totals.		Grand Totals.	
	European.	Chinese.	European.	Chinese.	European.	Chinese.	1903.	1904.
AUCKLAND—								
Coromandel	..	..	220	..	220	..	240	220
Thames	2	..	278	..	280	..	380	280
Paeroa	..	..	1,905	..	1,905	..	636	1,905
Te Aroha	..	..	28	..	28	..	27	28
Tauranga	..	..	1	..	1	..	5	1
Waihi	..	..	1,300	..	1,300	..	1,250	1,300
	2	..	3,732	..	3,734	..	2,538	3,734
MARLBOROUGH—								
Havelock	52	..	..	..	52	..	68	52
Blenheim	6	..	4	..	10	..	29	10
Cullensville	10	..	..	..	10	..	18	10
	68	..	4	..	72	..	110	72
NELSON—								
Wangapeka and Sherry	15	..	..	..	15	..	14	15
Takaka	20	..	..	..	20	..	20	20
Collingwood	85	..	64	..	149	..	172	149
Motueka	4	..	..	..	4	..	4	4
Nelson	10	..	..	..	10	..	..	10
Inangahua	256	120	663	..	919	120	1,130	1,039
Ahaura	350	100	50	..	400	100	479	500
Charleston	87	..	..	..	87	..	125	87
Westport, including Addison's, Northern Terraces, Waimangaroa, North Beach, Mokihinui, Karamea, and Lower Buller Valley	170	..	10	..	180	..	180	180
Lyell	75	2	36	..	111	2	69	113
Murchison	95	25	..	..	95	25	130	120
	1,167	247	823	..	1,990	247	2,323	2,237
WESTLAND—								
Ross	130	2	..	..	130	2	70	132
Stafford and Goldsborough ..	200	40	..	..	200	40	250	240
Hokitika and Kanieri	220	25	12	..	232	25	231	257
Kumara	205	22	..	..	205	22	239	227
Greymouth	753	172	..	..	753	172	920	925
Arnold								
Okarito	30	1	..	..	30	1	21	31
	1,538	262	12	..	1,550	262	1,731	1,812
OTAGO—								
Hindon	20	1	21	..	41	1	42	42
Tuapeka	530	100	16	..	546	100	560	646
Clyde, Roxburgh, Black's, and Alexandra	700	65	10	..	710	65	898	775
Cromwell	300	25	10	..	310	25	352	335
Tapanui	5	..	..	..	5	..	6	5
Waikaia	160	30	..	..	160	30	180	190
Wyndham	8	..	..	..	8	..	10	8
Waiau and Orepuki	98	20	..	..	98	20	3	118
Preservation Inlet	..	..	8	..	8	..	171	8
Athol, Te Anau, and Manapouri ..	3	..	..	..	3	..	..	3
Roundhill, Riverton, and Colac Bay	48	8	..	..	48	8	61	56
Wakatipu Goldfields—Arrow, Macetown, Cardrona, Kawarau, Bracken's, and Motatapu	15	6	45	..	60	6	176	66
Queenstown	87	18	20	..	107	18	193	125
Naseby								
St. Bathan's	239	81	56	.	295	81	466	376
Hyde								
Macrae's								
Maerewhenua and Kurow ..	..	..	..	..	..	..	90	..
Pembroke	..	..	..	..	..	..	42	..
Gore	280	3	..	..	280	3	258	283
Stewart Island	6	..	..	..	6	..	..	6
Campbell Island	1	..	..	..	1	..	..	1
	2,500	357	186	..	2,686	357	3,508	3,043
SUMMARY.								
AUCKLAND	2	..	3,732	..	3,734	..	2,538	3,734
MARLBOROUGH	68	..	4	..	72	..	110	72
NELSON	1,167	247	823	..	1,990	247	2,323	2,237
WESTLAND	1,538	262	12	..	1,550	262	1,731	1,812
OTAGO	2,500	357	186	..	2,686	357	3,508	3,043
Totals	5,275	866	4,757	..	10,032	866	10,210	10,898

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DIAGRAM showing TOTAL QUANTITY & VALUE of GOLD exported from NEW ZEALAND, for the years 1857 to 1904.

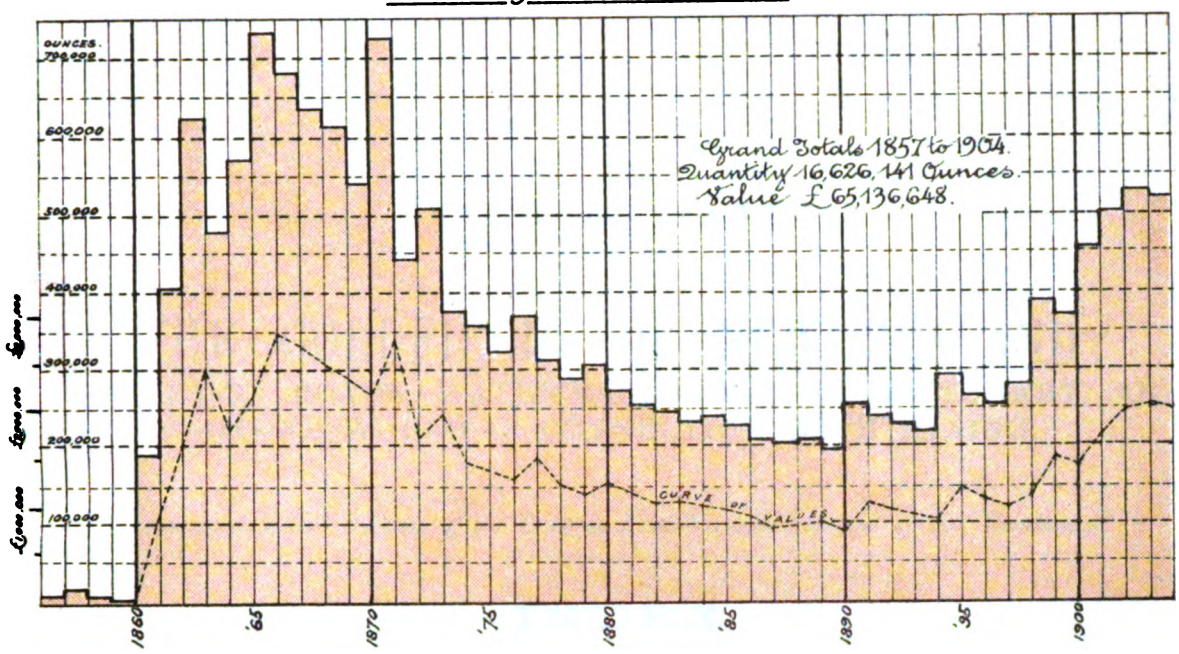


DIAGRAM showing TOTAL QUANTITY & VALUE of KAURI GUM exported from NEW ZEALAND, for the years 1853 to 1904.

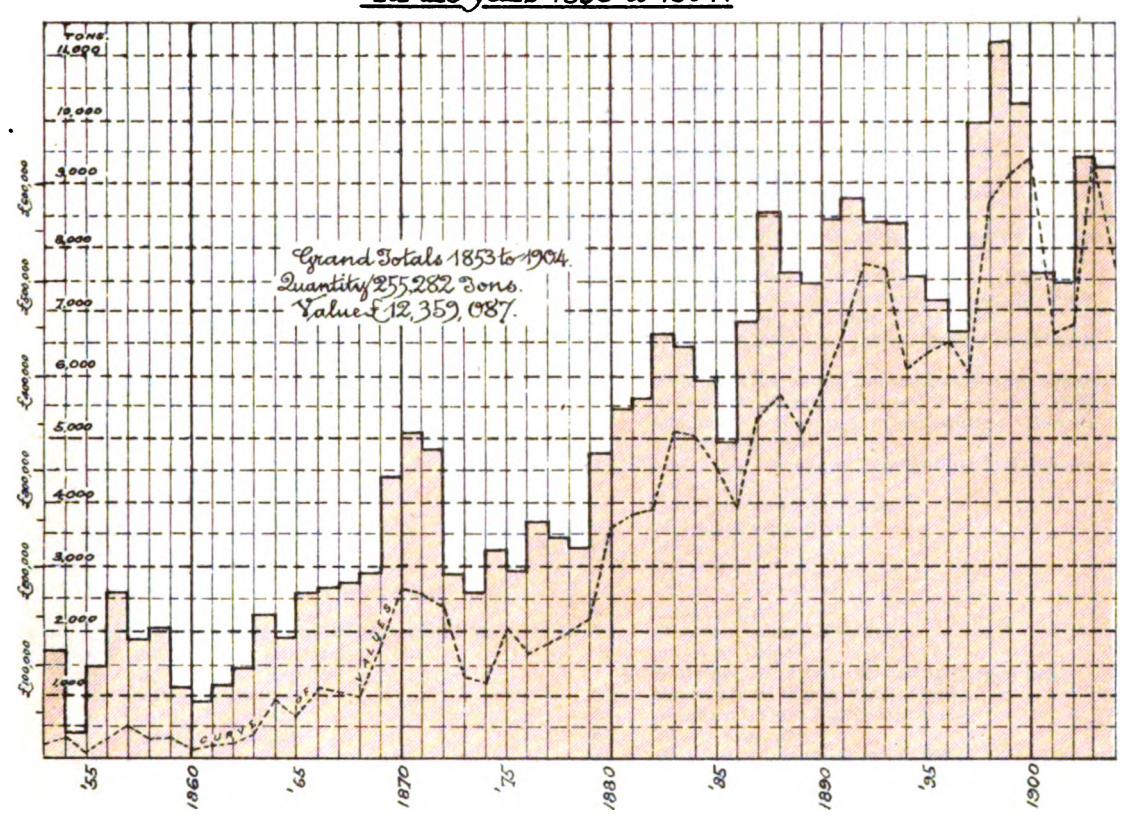
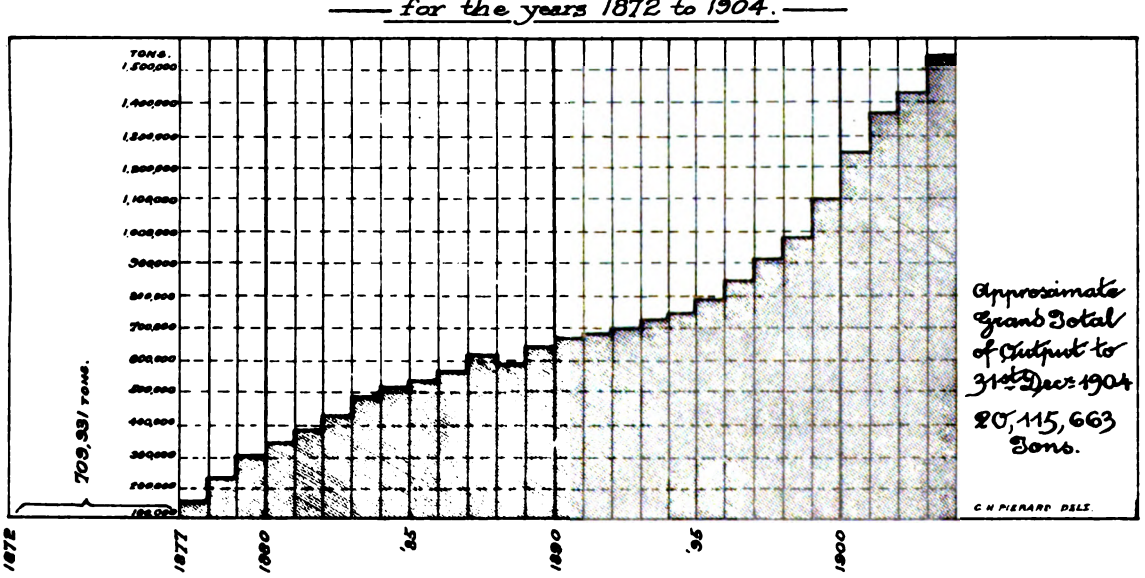


DIAGRAM showing TOTAL OUTPUT of COAL from N.Z. MINES, for the years 1872 to 1904.



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NEW ZEALAND.

THE GOLDFIELDS OF NEW ZEALAND:

REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

Presented to both Houses of the General Assembly by Command of His Excellency.

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NEW ZEALAND.

THE GOLDFIELDS OF NEW ZEALAND:

REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

Presented to both Houses of the General Assembly by Command of His Excellency.

Mr. JOHN HAYES, F.S.Sc., Inspecting Engineer, to the Hon. JAMES McGOWAN, Minister of Mines.

SIR,— Mines Department, Wellington, 22nd May, 1905.

I have the honour to submit my annual report, together with those of other departmental officers, Inspectors of Mines, Wardens, managers of water-races, &c., for the year ending the 31st December, 1904.

In accordance with the usual practice, the tables showing expenditure through the Mines Department on roads, bridges, tracks, prospecting operations, &c., are for the period covered by the financial year—viz., from the 1st April, 1904, to the 31st March, 1905.

SUBSIDISED ROADS AND TRACKS.

The expenditure (as subsidies) and the liabilities on outstanding authorities for the year ending the 31st March, 1905, are as follows:—

Name of Local Body.	Expenditure for the Year ending 31st March, 1905.	Liabilities on Authorities on 31st March, 1905.
	£ s. d.	£ s. d.
Coromandel County...	130 0 0	...
Piako County	100 0 0	...
Westland County	22 8 7	40 0 0
Grey County	36 10 0	...
Roads Department	121 17 6	2,128 2 6
Contingencies	124 18 4	...
Compensation for accidents	57 12 0	...
Totals	593 6 5	2,168 2 6

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ROADS CONSTRUCTED BY DIRECT GRANTS.

The following statement shows the expenditure and liabilities on authorities issued on roads from direct grants to the several local bodies during the year ending the 31st March, 1905 :—

Name of Local Body.	Expenditure for the Year ending 31st March, 1905.	Liabilities on Authorities on 31st March, 1905.
	£ s. d.	£ s. d.
Coromandel County	3,312 15 4	2,838 9 2
Thames County	1,759 1 0	2,606 7 7
Thames Borough...	200 0 0	100 0 0
Ohinemuri County	1,152 19 8	2,105 5 0
Pelorus Road Board	...	350 0 0
Takaka County	117 2 10	1,201 6 6
Collingwood County	828 11 7	126 0 0
Waimea County	400 0 0	1,480 5 8
Buller County	3,191 12 6	3,858 7 6
Inangahua County	1,917 15 4	2,256 15 3
Grey County	820 0 0	1,490 0 0
Brunner Borough	276 11 4	...
Westland County	1,293 13 3	1,746 7 6
Tuapeka County	...	1,164 0 0
Vincent County	305 7 6	1,574 2 6
Lake County	438 9 0	530 0 0
Southland County	250 0 0	750 0 0
Makarewa - Hedghope River Board	...	400 0 0
Wallace County	44 11 9	200 0 0
Stewart Island County	...	450 0 0
Roads Department	5,234 3 4	2,577 10 1
Public Works Department...	3,976 3 4	2,190 1 5
Totals	25,518 17 9	29,994 18 2

PROSPECTING FOR GOLD.

The following statement shows the expenditure and liabilities on authorities issued in subsidies to prospecting associations and parties of miners in the different counties for the year ending the 31st March, 1905 :—

Name of County.	Expenditure for Year ending 31st March, 1905.	Liabilities on Authorities on 31st March, 1905.
	£ s. d.	£ s. d.
Coromandel	227 0 0	72 0 0
Thames	1,967 11 1	1,198 18 3
Buller	28 18 6	126 1 6
Grey	62 12 6	...
Westland	283 9 7	217 17 9
Takaka	...	13 0 0
Totals	2,569 11 8	1,627 17 6

THE GOLD-MINING INDUSTRY.

The return of gold exported for the year ending the 31st December, 1904, shows a falling-off in value (as compared with that of the previous year) of £50,330, the figures being £1,987,501 for 1904, as against £2,037,831 for 1903, when the highest mark for many years was reached. The value returned for the year 1904 is, however, in excess of that of 1902 by £36,068.

In comparing the returns of the several districts it is found that the northern goldfields show the greatest decrease. This may be accounted for by the reduced output of the Crown Mines at Karangahake and several small mines on the Hauraki Peninsula. The decrease reported from the Marlborough, Nelson, and West Coast districts is principally due to the gradual exhaustion of some of the areas where gold is won from alluvial deposits by sluicing, and also to a number of dredges having ceased operations on account of the value of gold won not being sufficient to meet all working-expenses.

On the other hand, the Southern District (Otago and Southland) shows an increase, valued approximately at £15,912, as compared with the export returns of 1903. This increase would undoubtedly have been greater still had the conditions as to water-supplies for hydraulic mining and the state of the rivers for gold-dredging been fully up to the average.

The total value of gold exported from the year 1857 to the end of last year, 1904, was £65,136,648.

The several branches of the industry in the various districts are referred to under their several headings.

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PRODUCTION OF GOLD.

The following comparative statements show the quantity and value of gold entered for exportation for the last two calendar and financial years:—

Name of District.	Year ended 31st December, 1904.		Year ended 31st December, 1903.		Increase for 1904.	Decrease for 1904.
	Quantity.	Value.	Quantity.	Value.		
	Oz.	£	Oz.	£	Oz.	Oz.
Auckland ...	223,010	791,529	232,681	832,334	...	9,671
Marlborough ...	473	1,890	972	3,845	...	499
Nelson	5,049	20,141	7,962	31,710	...	2,913
West Coast ...	122,310	489,177	125,241	501,090	...	2,931
Otago	169,478	684,764	166,458	668,852	3,020	...
Totals ...	520,320	1,987,501	533,314	2,037,831	3,020	16,014*

Name of District.	Year ended 31st March, 1905.		Year ended 31st March, 1904.		Increase for 1905.	Decrease for 1905.
	Quantity.	Value.	Quantity.	Value.		
	Oz.	£	Oz.	£	Oz.	Oz.
Auckland ...	222,652	815,499	233,271	834,070	...	10,619
Marlborough ...	166	662	1,279	5,073	...	1,113
Nelson	6,461	25,814	8,222	32,819	...	1,761
West Coast ...	119,545	478,050	126,184	504,845	...	6,639
Otago	170,388	688,551	171,489	690,141	...	1,101
Totals ...	519,212	2,008,576	540,445	2,066,948	...	21,233†

* Total net decrease, value £50,330. † Total net decrease, value £58,372.

QUARTZ-MINING.

North Island.

The Northern District continues to be the chief field for quartz-mining—in fact, the gold-mining industry of this part of the colony is exclusively confined to the mining of quartz and the extraction therefrom of the precious metals—silver being also incorporated in the quartz—as distinguished from the more varied methods of gold-mining practised in the South Island, where alluvial gold is extensively worked in addition to the gold contained in quartz reefs.

As usual, the Waihi Gold-mining Company's mine is responsible for the largest output of quartz, which for the year amounted to 259,978 tons. Of this amount 141,200 tons was treated with cyanide, direct from the stampers, the balance of 118,778 tons being passed over amalgamating-tables prior to treatment by cyanide. The production of bullion and the values of concentrates and slag-tailings shipped amounted to £673,101 8s. 4d., which represents an ore-value of £2 11s. 9·3d. per ton. Dividends to the amount of £297,544 4s. were paid during the year. The gross sum so paid now totals £1,552,687 11s. 6d.

At the mine the erection of the large new pumping plant (referred to in last report) has been completed, and is successfully at work. A new pair of winding-engines, having cylinders 18 in. diameter by 3 ft. stroke, geared 2 to 1 to a drum 9 ft. in diameter, have been erected at No. 1 shaft. This increase of pumping and winding power will enable the management to further develop the property to a considerable extent. Underground the development-works keep pace with requirements, so that there is always an ample area of ground opened up to allow of an output of ore being steadily maintained, equal in amount to the combined crushing-capacity of the several mills. These latter contain an aggregate of 330 heads of stamps, as under:—

	Heads.
Waihi Mill, Waihi	90
Union Mill, Waihi	40
Victoria Mill, Waikino	200
Total	330

Extensive additions have been made, at the mills, in plant connected with the treatment of ores, and include coal-hoppers, additional boiler-power, vats for sands and slimes, turbine, elevator-wheel, and tube mills. These latter are used for grinding concentrates, which, after being ground, are subjected to treatment by cyanide solution and aeration (compressed air being used) for the recovery of gold and silver. The adoption of the process of tube-mill grinding and subsequent treatment enables the extraction of bullion from concentrates to be carried out at the mills, and obviates the necessity for their shipment to smelting-works outside the colony.

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A very complete foundry has been erected at the Victoria Mill, Waikino, so that the company can now make their own ordinary castings—a saving in point of time, at all events, when urgent repairs or renewals are necessary. This additional convenience to the mechanical department, which previously comprised good smith's and machine shops, sawmill, &c., will doubtless prove a valuable adjunct.

The company employed an average of 1,236 persons during the year in connection with the several branches of work at the mine and mills.

Encouraged by the success which has attended the operations of the Waihi Gold-mining Company (Limited), other companies in the locality have displayed marked activity during the year. This was especially so at the Waihi Grand Junction Mine, the management of which has conducted development-works, resulting in a fairly large body of quartz being met with. A comparatively new forty-stamp battery and cyanide plant (used a short time at the Kauri Freehold Gold Estates Company's property at Opitonui) have been purchased and removed to Waihi for erection near the mine.

In view of the production of ore at an early date, the machinery in and about the mine has been overhauled and the plant and buildings added to. I hope that next year it will be my pleasure to report the Grand Junction Mine having entered the list of productive concerns.

A considerable amount of prospecting-work was carried out in the Waihi Extended Mine. This, so far, appears to show that the quartz reached is practically the cap of the reef, and that sinking to a greater depth will have to be undertaken to get a good body of ore. Present indications appear favourable in this direction; and, should subsequent operations verify the supposition, the Waihi Extended Mine may be looked to as one of the productive properties of the future.

A small quantity of ore has been treated from the workings of the Waihi Gladstone Mine, but the results, so far, are not remunerative. Further developments may possibly prove something better.

At Waihi Beach, a new mine belonging to the Waihi Beach Gold-mining Company is being opened up, shaft-sinking, &c., having been in progress during the year.

Boring operations, having for their object the location of the reef system believed to extend beyond the boundaries of those properties in which it has already been definitely proved, have been carried on during the year on the claims of the Waihi Consolidated Gold-mining Company (Limited) and the Waihi Consols Gold-mining Company (Limited), and it is possible that other mining companies may dopt a similar course. Operations of this class, if successful in their object, will do much to extenda the mining industry of the locality and the general prosperity of the district.

Some prospecting has been done during the year on claims to which protection has been granted to give time to raise the necessary capital for their development.

Mining at Karangahake is represented by two companies—viz., the New Zealand Crown Mines Company (Limited) and the Talisman Consolidated Company (Limited). Since my last report the Woodstock Mine and property have been taken over by the Talisman Consolidated Company. Operations at the Crown Mines have not been so successful during the year as was the case for some years previously, a result attributed to the decreased value of the ore worked—viz., an average of £1 19s. 8¾d. per ton, as against £2 12s. 0½d. for the previous year, and also to the conditions met with in the lower levels. The ore-bodies have not been found so good or continuous as was expected in the shaft workings, the reef system being, to a certain extent, disturbed by faults. It is understood that a scheme for the further development of the property will be carried out, and hopes are entertained that the mines will shortly be in a position to maintain their former *prestige*. At the Talisman Mine operations have been very steady throughout the year, and a considerable amount of development-work carried out, resulting in the opening-up of considerable areas of quartz. The acquisition of the Woodstock Mine is of considerable benefit in the working-arrangements of the Talisman Mine, providing, as it does, an outlet at a lower level and increased facilities for ventilation. Generally speaking, the outlook for the present year is regarded as good, the operations of last year showing that the Talisman reef maintains its size and value as it goes down. The average value obtained from the ore treated during the year was £1 17s. 9½d. per ton.

Some two or three claims are held in this locality, upon which little has been done during the year beyond what comes within the definition of prospecting, and three others are under protection.

Mining at Waitekauri may be said to be practically at a standstill. Extensive boring operations were conducted by the Waitekauri Gold-mining Company (Limited) at their Golden Cross Mine in addition to other prospecting-works on their property, but the results obtained are far from encouraging. An exception must, however, be made in favour of the work done in the Old Waitekauri section, where stone has been obtained to the value of £4,612 18s. 1d., giving an average value of £2 15s. 11½d. per ton. Work has been carried on at other claims in the neighbourhood, but there is no discovery of material value to report at present. It appears probable that some efforts may be made during the present year to ascertain the existence or otherwise of payable ore (at greater depth than that commanded by the adit-levels) at one of the properties in this locality.

At the Komata Reefs Mine operations have been steadily carried on, the output of ore being returned at 15,800 tons, value £32,559 17s. 3d., equal to an average of £2 1s. 2½d. per ton, or 9s. per ton lower than the average of the previous year. The sum of £6,666 13s. 4d. was paid in dividends. The battery plant has been added to, a small tube mill being adopted for grinding the coarser sands. The plant, though not large, is very complete, and answers its purpose very well.

On the Ohinemuri River there are accumulations of tailings which are considered to carry sufficient gold and silver to warrant treatment for the extraction of bullion. A plant for this purpose has been erected near Waihi, and it is understood that the initial difficulties—such as are usually experienced in new undertakings of a somewhat experimental character—have been successfully overcome. This being so, we may look forward to the recovery of precious metals which would otherwise be lost, and the establishment of a payable, if somewhat limited, industry.

In my last report mention was made of the probability of Mr. Hardy's mines and battery at Waiorongomai, near Te Aroha, being taken over by a company. This has since been done, and the new

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proprietary is known as Hardy's Mines (Limited). Since the company took possession in April, 1904 a considerable amount of new work in connection with the mine and battery has been accomplished, which will admit of an increased output of ore being dealt with. As a matter of course, these new works and the reorganization of previously existing arrangements practically stopped the ordinary work of the mine and battery, hence this concern does not show more than a mere nominal production for the year; but as everything was getting into good working-order on the occasion of my last visit to the property, an increased tonnage and yield of bullion may be expected this year.

At and in the locality of Hikutaia there is a possibility of a revival of active mining, recent operations on a small scale having given very promising results. A little work was done at Puriri and Omahu, but without payable results. Operations have therefore been suspended.

Important works have been in progress at Neavesville during the year. Encouraged by the results obtained at an adit driven from near the level of the Puriri to Tairua track, adjacent to the Neavesville accommodation-house, a new low-level has been commenced from the gully, which will enable the work to be carried on, level free, for upwards of 100 ft. below the adit named; the latter—after an underground connection has been made—giving a second outlet and return airway. Further down the valley a battery installation, comprising forty stamps, concentrators, and cyanide plant, was being erected at the time of my last visit to the district. Connection between the mine-mouth and the battery will be made by an aerial tramway. It is expected that the low-level will be completed, the aerial tramway erected, and the battery put into working-trim about the middle of this year (1905). The returns from this property will be looked forward to with interest.

The output at the Tairua Broken Hills Mine for 1904 was only 3,700 tons, having a value of £10,287 1s. 10d., or an average of £2 15s. 7¼d. per ton. As compared with the returns of the previous year this is a decrease (*a*) in quantity of 2,655 tons, (*b*) in value of £10,859 16s. 10d., and (*c*) in average value per ton of 10s. 11½d. The reduced tonnage is accounted for by the reef above adit-level becoming largely exhausted during the early part of the year. At my inspection in October last a winze was being sunk for the purpose of opening out the ground at a lower level. At the Coronation Mine (adjacent to that of the Tairua-Broken Hills Company) an adit has been driven into a peculiar and hard formation carrying gold. Very good prospects can be obtained simply by panning the rock which has been broken up to a small size in the ordinary work of tunnelling. Portions of this rock have been classed as the equivalent to "clinkstone" (so called from the clinking sound produced when pieces are knocked against each other), a rock found in some of the gold-mining districts of America. I forwarded a sample to the Government Geologist, Mr. McKay, who classed it as rhyolite. A small battery is to be erected to test the value of this stone on a commercial scale.

The Chelmsford Mine (also in the Tairua locality) was idle for some time, but during the latter part of the year operations were resumed for the purpose of further developing the property.

A very promising outcrop of quartz has been discovered between Hikutaia and Whangamata, a sample lot treated at the Thames School of Mines showing a value of something like £42 per ton. A company, known as the Waimangu Gold-mining Company (Limited) has been formed for the purpose of working the claim. There is some prospect of the Mananu Mine, Whangamata, being again worked.

Prospecting operations, which for some time were being vigorously carried out at Te Puke, have been indefinitely suspended.

Mining at and adjacent to Thames was very quiet throughout the year, but shortly before Christmas the discovery of good gold-bearing stone, from 15 ft. to 20 ft. in width, at the Waiotahi Mine caused the owners of neighbouring mines to give more consideration to the question of prospecting on somewhat comprehensive lines. Mr. Coutts, Inspector of Mines for the district, reports that the first 50 tons of general ore, together with 516 lb. of picked stone, yielded a return of bullion worth £1,667 4s. 11d., or, roughly speaking, a value of £33 per ton, inclusive of picked stone. If there is a considerable body of stone of this character in the locality, the mining industry of Thames will revive very considerably. It is regretted generally that the boring operations which were undertaken in the hope of proving the deep ground had, from various causes, to cease before their object was fulfilled satisfactorily one way or the other. The nature of the ground drilled through makes it appear that the only way to satisfactorily prove the deep levels at Thames will be by sinking, and then driving a long cross-cut to intersect the various lines of reef below what has been termed "the barren zone."

Several small mines in the locality have been working throughout the year with varied results; but with the exception of the discovery at the Waiotahi Mine, already mentioned, there is nothing of importance to specially comment upon. Some of the properties in the locality have been taken over by a local syndicate, and small companies formed for the purpose of working the mines. At Mr. Judd's tailings plant, bullion to the value of £1,947 19s. 6d. has been obtained from tailings on the foreshore.

Acting on your instructions, I made a careful examination in October last of the large plant at the Queen of Beauty shaft (formerly the property of the Thames-Hauraki Company, but now belonging to the New Zealand Government), which had been idle for a period of about three years.

After a careful warming-up of the boiler-flues preparatory to raising steam, examination of valve faces on the engines, necessary cleaning of bearings, glands, &c., the engines and pumps were put to work for a couple of days, everything being in as good condition as when work was suspended. The whole pumping-plant worked most efficiently. A run of a few hours' duration was also made with the air-compressing plant, which was equally satisfactory. After the trial the working-parts were well lubricated, bright work coated with vaselene to prevent rust, and the plant left in order so that it could be put to work at short notice should occasion arise. This was considered possible in view of the age and condition of the old Big Pump worked under the control of the Thames Drainage Board. The pump at the Queen of Beauty shaft has, since the early part of the present year, been used by the Drainage Board under arrangement with the Government, and is, I understand, satisfactorily effecting the drainage of the field.

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After being idle for some time operations have been recommenced at the Tararu Mine, Tararu Creek. These have so far taken the form of development-work, for the purpose of winning more ore and gaining increased facilities for handling the same. It is to be hoped that mining in this part of the field will be again vigorously and profitably carried on. In the Eclipse Mine the low-level tunnel has been extended during the year, with the object of reaching ore below workings from a higher level. Some good stone has been cut, a crushing at the end of the year resulting in a return showing an average value of £6 10s. 5·4d. per ton.

In my last report, the Monowai Mine at Waiomo was stated to have been closed down. During the year it was taken over by a local syndicate, and on the occasion of my official visit to the district in October last I found that operations had been resumed, the low-level tunnel being cleaned up and put into good working-order. I understand that a contract has since been let for driving on the reef. The ores here are of a refractory character, and require special treatment, as compared with the general character of the quartz in the Thames portion of the goldfield.

It is to be regretted that the results of operations at the Mahara Royal Mine, Tapu, have not been nearly so successful as they appeared to promise some two years ago. The stone has been found to be patchy, the shoots very variable in width, and—judging from the battery returns—decidedly poor in quality, the average value of stone crushed during the year being only 19s. 0½d. per ton, compared with £1 14s. 2d. as that of the previous year. Gold-saving has been by amalgamation, and, although concentrates are separated from the sands, no information as to their value is given.

The Sheridan Mine (in the same locality) was worked by a company for a short time. Results not proving satisfactory, the property was disposed of to a small private party. Sixteen tons of quartz was crushed during the year, giving a bullion value of £115 12s. 11d., equal to an average of £7 4s. 6·6d. per ton.

Coming to the Coromandel portion of the Northern Goldfields, very little of a really encouraging character can be said as regards the operations carried on and the amount of precious metals produced during the past year. Mining in the locality has hitherto been, and still is, practically confined to small lodes, many of which have been found to carry very rich gold in places; small lots of "specimen" stone, rather than the general average tonnage of quartz produced, yielding the best payable returns. The late Mr. Francis Hodge, M.E., has, on more than one occasion, expressed to me his opinion that the large body of quartz which is to be seen outcropping along the road-side going up Tokatea Hill from Coromandel is the "mother-reef" of the locality, and that the various lodes and leaders upon which mining has so far been carried out are simply branches and sub-branches of this large reef. His views as to the desirability of proving the stone at depth formed the subject of a letter to me a few months previous to his death. This, together with a copy of a plan and section showing his proposals for proving the continuation of this large body of ore—which he calls "the Tokatea Big Reef"—and its supposed position in relation to the several claims in the neighbourhood of the Upper Township, will be found in my report of last year. I may remark that in the letter referred to the late Mr. Hodge stated that "it is a well-known fact that this Big Tokatea reef is not payable down to the datum-line of sea-level. In width it varies from 20 ft. to 60 ft. It is assumed by many that this Big Reef would, in depth, be proved to contain highly payable gold-ore, and the most economical method of testing the accuracy or otherwise of this theory would be by diamond bores."

In view of the known extent of this large body of stone from surface exposures, it would, in my opinion, be a desirable course of action to have its continuity and value determined to a considerable depth below sea-level. Should it be found to live down, to maintain a good size, and carry even very moderate values, the working of this big reef and the treatment of the ore would do for Coromandel primarily, and the colony generally, a vast amount of good. The matter is not one for a small party: it would have to be taken up on comprehensive and thoroughly modern lines even as regards preliminary prospecting, and the question of the interests of existing claimholders as to this large reef—which they do not work in any case—through whose areas the reef may be found to run, settled in the first instance. As this would be an entirely new thing, and existing holders of claims have done nothing practically to prove this reef at depth, the withdrawal of their rights in respect to it would be quite equitable.

Early in the present year a proposal was made to the Department for prospecting this reef at the joint expense of the local public and the Government. After inquiry, it was decided to subsidise the work at the rate of £1 for £1 up to £300 through the Coromandel County Council.

Actual operations during the year have been conducted on the Hauraki Block below the township at the Old Hauraki, Bunker's Hill, Hauraki Freeholds, Golden Pah, and Success Mines. At the first-mentioned mine a pumping-plant is installed, and during the year the mine was unwatered from the 220 ft. level down to the bottom, or 410 ft., level. At this lowest level very little work has hitherto been done, and it was considered that the development of the mine at this depth might prove satisfactory. The work of repairing the shaft below the 220 ft. level and the installation of a new plunger at the bottom was both arduous and costly. Pumping from this low level was alleged to be of material benefit to the adjoining mines, the owners of which failed to satisfactorily recognise the position, and declined to contribute to the cost of drainage by the pumping operations at the Old Hauraki Mine. In consequence of this, the proprietors of the Old Hauraki Mine suspended the work of pumping, the result being that after a few days the workings of the Bunker's Hill Mine were flooded, and work there had to stop so far as operations from the shaft were concerned. Although the Hauraki Freeholds Mine was not nearly so much affected as was the Bunker's Hill Mine, the property is to some extent suffering in consequence of the water trouble. A mutual agreement as to the proportionate charges to each mine for pumping would get over the difficulty, but, failing an amicable understanding being arrived at, the only way appears to lie in the formation of a Drainage Board, or, as an alternative (and, considered from a working standpoint, the more practical method), a consolidation of interests.

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The value of gold won in the Hauraki Block during the year was £4,989 1s. 10d., and fifty persons were employed.

Bullion to the value of £701 4s. 8d. was obtained at the small tailings treatment plant of Messrs. Shepherd and Patterson near the beach. This plant gives employment to three persons, and affords a good illustration of what can be done with old tailings without a very great capital outlay.

In the Tokatea portion of the Coromandel locality, mining has provided employment for eighty people, and bullion has been won to the value of £9,967 1s. 11d. Of these totals, the Royal Oak Mine is responsible for the employment of forty-six persons, and a bullion yield of £9,110 1s. 7d. in value. It will thus be seen that during last year the production of other small mines was very limited.

Mining in the neighbourhood of Kennedy Bay has been carried on at the Four-in-hand Mine and the Old Whangapoua and Exact Claims, fourteen persons being employed and bullion to the value of £1,220 15s. 3d. obtained. At the New Four-in-hand Mine, a new low-level tunnel is being driven from the Waikoromiko Creek to cut the Tainui and Four-in-hand reefs considerably below the present and former workings. The country-rock through which this tunnel is being driven is of a somewhat different character to the overlying andesite common to the district. I therefore submitted a sample to the Colonial Analyst for his analysis. This is as follows:—

	Per Cent.
Silica	56·3
Alumina	20·4
Calcium-carbonate	8·2
Magnesia	2·4
Alkalies	4·4
Iron-sulphide (iron-pyrites)	6·0
Moisture	2·3
	100·0

If it is found that the reefs live down into this lower rock and maintain their values (the average for last year from higher levels being £3 18s. 2d. per ton), the company have a very good property. A much lower level opening than the present one is practicable from the valley of Waikoromiko Creek, and should the size and quality of the reefs continue satisfactory, a very considerable amount of ore can be won without the necessity of hoisting or pumping appliances.

At Cabbage Bay, a small leader has been worked on at the White Star Claim by two men.

The principal mining operations in the neighbourhood of Kuaotunu are being carried on at the Waitaia Mine, the returns for 1904 showing an increase in the value of bullion produced of £1,526 8s. 6d. as compared with the production of the previous year. During the period under review the output of milling quartz was 1,119 tons, which gave an average value of £5 8s. 3·4d. per ton. Most of the stone is being obtained from leaders. Development-work for the purpose of opening up the mine at a lower level will have to be shortly undertaken.

A small amount of work has been done on other properties in the locality, the most productive of which was at the Otama Mine. From this property gold to the value of £410 12s. 9d. was obtained, the average being equal to £3 14s. 11·8d. per ton of stone treated.

At Gumtown, two small mines—the Kopowai and the Big Beetle—have been worked to some extent during the year for a combined total output of 688 tons of milled quartz, value £1,803 15s. 4d., equal to a general average of £2 12s. 6·7d. per ton.

On the Great Barrier Island, work at the Barrier Reefs was confined to the treatment of tailings, resulting in a bullion value of £2,380 18s. 3d., two men being employed. At the Sunbeam Mine, development-work is in progress. A small battery plant for the treatment of the ore is also in course of erection.

The reports of Mr. Coutts, Inspector of Mines, Thames, and Mr. Warden Bush deal very fully with gold-mining on the Hauraki Peninsula, within the boundaries of which the industry is (with slight exceptions) confined so far as the North Island is concerned.

Middle Island.

There is practically nothing of importance to report as regards quartz-mining in the Marlborough Province. Company reconstruction has been effected for the working of the Jubilee Mine at Top Valley, near Blenheim, and work for the development of the property at a lower level put in hand. The proprietary is now known as the Wairau Gold-mining Company.

Some prospecting on behalf of a Wellington syndicate was also undertaken in another part of a the district. It is understood that capital will be forthcoming if the results of prospecting operations are sufficiently promising.

At Taitapu (West Wanganui) the Golden Ridge (Taitapu Gold Estates) Mine had a much smaller tonnage output than that of the previous year. The average value of the ore treated was £4 15s. per ton. The other mine in this locality, the Golden Blocks, is returned as showing an increase in the amount of gold obtained in comparison with the yield of the previous year, the value per ton working out at £3 12s. 8½d., or an advanced value of 4s. 4½d. per ton milled. The total value of gold obtained from the two properties is given as £11,833 14s. 2d., and 3,057 tons of quartz was crushed.

Only one small mine in the vicinity of Westport produced gold during the year—viz., the Britannia Mine, near Waimangaroa. The quantity of stone treated was 765½ tons, from which a gold value of £2,506 15s. 10d. was obtained. Average value, £3 5s. 6d. per ton; dividends for the year, £333 6s. 8d. The Red Queen Mine, Mokihinui, has been let on tribute, the tributers being engaged on development-works during the year.

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At the Alpine Extended Mine, Lyell, a good deal of development-work has been done during the last few years, with disappointing results as regards the amount of payable quartz won, and the experience gained during the past year has not been of an encouraging character, the stone pinching out in various places. The value of the ore is approximately £2 per ton, extraction being by amalgamation and cyanide. Kelly and party (four men), who are working the old United Italy Claim above Lyell, have done a considerable amount of development-work during the year, and also won gold to the value of about £600.

In the neighbourhood of Boatman's (Capleston) the Welcome Mine was worked on tribute during the early part of the year, the output of stone sent to the mill (382 tons) giving an average value of £4 10s. 4·8d. per ton; 225 tons of tailings, yielding £1 6s. 3·9d. per ton, was also treated by cyanide. At the expiration of the tribute agreement the tributers would not enter into a fresh contract, notwithstanding the payable character of the ground worked. The mine was consequently closed down for the time being pending the decision of the Home directorate, protection for a period of six months being obtained.

In the same locality, Knight and party have taken up some mining claims at Italian Gully, and are opening out an old crosscut to win a quartz reef which was prospected several years ago. A small battery plant will be erected. Samples of the stone (which I recently saw at the claim) look very promising. The reef is about 2 ft. 6 in. wide.

At Kirwan's Reward Claim (Victoria Range) loose broken quartz and mullock are quarried on the surface, and sent down to the battery on an aerial tramway having a fall of some 1,800 ft. in, say, three-quarters of a mile. As there are no underground-mining expenses, and the battery is driven by water-power at a minimum of expense, the yield of £1 4s. 10d. per ton on the material crushed during the year leaves a very substantial margin of profit, the value of gold obtained being £7,764 16s. 11d., and dividends paid to the amount of £2,800. From present appearances, this property is likely to prove a profitable concern for several years to come. The locality is one which offers considerable inducement to *bona fide* prospectors, and it may be remarked that since the commencement of the present year a very promising reef has been discovered by Mr. Kirwan on the opposite watershed of, and adjacent to, the Waitahu River. This discovery is known as Kirwan's New Find.

Mining work in the vicinity of Reefton is very fully described in the reports of Mr. Tennent, Inspector of Mines, and Mr. Warden Kenrick. The principal productive properties at present worked are those under the control of the Consolidated Goldfields of New Zealand (Limited), the Progress Mines of New Zealand (Limited)—which is under the same general management—and the Keep-it-Dark Mine.

The Wealth of Nations Mine at Crushington, and the Golden Fleece Mine at Black's Point, are worked by the Consolidated Goldfields Company. At the former, 12,748 tons of ore was raised, and yielded £14,666 16s. 8d. by amalgamation and £5,941 5s. 1d. by cyanide treatment; slimes and concentrates to the value of £1,068 5s. 3d. were also disposed of; the total value obtained being £21,676 7s., or equal to an average of £1 14s. per ton. The working-costs are returned at 16s. 4·88d. per ton. Future developments at this property will be from the Energetic shaft, which is sunk below the bottom level of the Wealth of Nations Mine, and connected thereto. At this shaft a fine modern steam winding-plant has been installed, together with air-compressor and electric light. The winding-engines have a pair of 18 in. cylinders, and the drums are on the crank shaft, no intermediate gearing being used.

The output of the Golden Fleece Mine for the year was 12,930 tons of ore, from which the following values were obtained: By amalgamation, £21,040 17s. 6d.; by cyanide process, £3,011 7s. 5d.; slimes and concentrates, £1,940 3s. 7d.; making a total of £25,992 8s. 6d., or an average value of £2 0s. 2·4d. per ton. The returns show a slight decrease compared with those of the preceding year.

The Progress Mines at Progress Hill, and the 65-stamp battery with cyanide and chlorination plants on the Inangahua River above Crushington, comprise the principal gold-mining property at which lode-mining is carried on, and the ore treated, in the Middle Island. Connection between mine and battery is made by an aerial tramway, the power employed in working it being that due to gravitation. During last year 59,908 tons of ore was mined for a total yield of £110,371 2s. 10d., giving an average value of £1 16s. 10·16d. per ton, the total working-costs being returned at 19s. 5·52d. per ton. A profit of £58,290 13s. 7d. was made. Nearly three hundred persons are employed at the company's mines and works.

At the Keep-it-Dark Mine at Crushington (one of the oldest and most consistent dividend-paying mines in the locality) the shaft has been sunk an additional 300 ft. The output of quartz was 12,300 tons, treatment (after crushing) by amalgamation and cyanide yielding gold to the value of £20,688 9s. 9d., apart from concentrates shipped, the value returns for which are not yet to hand.

The output of the New Inkerman Mine has not been great, 7,639 tons being mined during the year. A considerable expenditure was incurred a few years ago in opening up the mine at and above adit level, and a considerable amount of ore was proved. This is of low grade. An incline shaft was subsequently put down to ascertain the value of the stone at greater depth, and a proposal to extend this to a depth of 400 ft., or thereabouts, and also to prove at depth the possibilities of a large body of stone which is exposed on the surface and known as the Big Blow, has been made to the Home directorate. A continuous reef of the size seen at the surface, or approximating thereto, should, even at a very moderate average value per ton, be a good paying asset.

Very little productive work of any importance has been done at the Golden Lead, Industry, or New Scotia Mines, and quartz-mining in the vicinity of Merrijigs is practically at a standstill.

The Victoria and Inglewood properties are owned by Mr. P. N. Kingswell, of Reefton, who has carried on mining operations throughout the year, and erected a cyanide plant for the treatment of sands from the battery.

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At the Big River Mine, gold to the value of £3,653 7s. 6d. was obtained from 988 tons of ore. This is equal to an average of practically £3 14s. per ton. The shaft has been sunk to a deeper level, and cross-cutting put in hand to win the ore at greater depth than where already worked. Some prospecting in the district has been undertaken by a syndicate, whose operations have resulted in a small reef being found.

With the exception of the Garden Gully Claim, no work of any moment has been done on the Paparoa Ranges. At the property named, driving underground (for the purpose of obtaining proper ventilation) has been carried out, and several surface works have been undertaken. These, when complete, will allow of the conveyance of water for power purposes and the transport of ore to the (proposed) battery.

Attention has of late been directed to the reefs at the head of the Wilberforce River (near Browning's Pass), on the dividing range between the Canterbury Plains and the West Coast. Some work was done here on a limited scale several years ago, but the value or otherwise of the reefs does not seem to have been definitely ascertained. Work has been put in hand for the purpose of proving the size, extent, and value of the quartz reefs of this locality.

In the Southern Inspection District (which comprises Canterbury, Otago, and Southland) quartz-mining has been decidedly quiet during the past few years; but there is little doubt in my mind that, as the alluvial deposits become worked out, more earnest attention will be devoted to the further prospecting for, and development of, the quartz reefs in the south part of the Middle Island. So long, however, as there are areas carrying alluvial gold which can, as a general rule, be opened up and worked with comparatively little capital, it is hardly likely that local investors in mining properties will speculate in reef-mining, notwithstanding the fact that in the past quartz-mining in this part of the colony has, in many instances, proved a very remunerative investment. It is, of course, well known that in some localities the quartz worked to considerable profit several years ago was of such a nature as yielded up its gold by amalgamation, but at deeper levels became more refractory, thus necessitating the adoption of some chemical process. As the cyanide treatment was not then perfected or available, capital was naturally diverted from quartz-mining to alluvial mining, and thus the former branch of the gold-mining industry naturally fell off. In my last report reference was made to the fact that a practically straight line from near the head of Lake Wakatipu (on the west) to a short distance north of Oamaru (on the east) passed through the mines at Bullendale (Skipper's), Macetown, Bendigo (west side of Dunstan Range), and the quartz veins at Balruddery. It is probable that this line may represent the general trend of a reef system, and it is certainly worth the attention of prospectors to search for quartz reefs along, or adjacent to, the line mentioned between those places at which the reefs are actually known to exist. A feature well worth consideration is that if the northern boundary of the alluvial goldfield be traced out it will be found a little to the north of, and approximately parallel to, the line given, whilst to the south are the extensive alluvial goldfields of Otago and Southland.

None of the quartz-mines now being worked in Otago are on anything approaching a large scale. Those on the productive list for the year are the Shotover (Old Gallant Tipperary) near Skipper's Point, the Premier-Sunrise Mine at Macetown, Bendigo Mine near Cromwell, Barewood; also at the Carrick Range, the Old Man Range above Bald Hill Flat, Macrae's, and Nenthorn.

At Bullendale, the Mount Aurum Gold-mining Company have acquired the property formerly held by the Achilles Gold-mines Company, and are opening out higher levels than those worked by the late proprietary on other parts of the property. This work is to a great extent of a prospecting character, and will, if successful, give new life to this once flourishing locality. Prospecting work, some of it showing very encouraging features, has been carried out in the neighbourhood.

There appears a probability that several claims near Macetown will be worked by an English company. These claims have been noticed in previous reports, and the most advantageous way to operate them would be by the rights to the several claims being consolidated and a mine opened out on a comprehensive basis. Prospecting in this locality has had attention, and the discovery of a 2 ft. reef is reported, giving a return of about £8 per ton on a bulk sample of 25 tons.

The O.P.Q. Mines at Waipori are now idle and the plant largely dismantled, but it is expected that the property will be again taken up and worked.

Mining on the Canada Reef, near Milton, appears to be coming to the fore again; trial crushings have given most encouraging results.

In the neighbourhood of Nenthorn, Macrae's, and Mount Highlay, there are several small mining properties, at some of which scheelite (as well as gold) is associated with the quartz, and as this mineral is greatly in demand at the present time, the industry is marked by an increased activity as compared with that of the last few years.

Nothing of any moment is being done at Preservation Inlet.

It is satisfactory to note that increased attention is being given to prospecting for quartz reefs in different parts of Otago, and for other minerals on Stewart Island.

Details of the several quartz-mining operations in the Southern District will be found in the report of Mr. E. R. Green, Inspector of Mines.

HYDRAULIC AND ALLUVIAL MINING.

With the exception of a little work on Stewart Island this class of mining is confined to the Middle Island, alluvial goldfields being known and worked in all the provinces. Canterbury may be excepted, generally speaking, as the known deposits of alluvial gold in this part of the island are very limited. The principal fields are those of the West Coast, Otago, and Southland, in which districts operations are extensively carried on. There is, however, very little change to comment upon, as the bulk of the

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claims now working have been in operation for some considerable time, and their features and plant very fully described in previous reports.

In the Marlborough Province a little mining is carried on at Mahakipawa, Wakamarina, Deep Creek, and Onamalutu. A race is being constructed to bring in water to work ground in the last-named locality, the party doing this being satisfied that good results will be obtained.

Hydraulic mining, near Takaka (Nelson), is being successfully conducted, and prospecting carried out (further back from the coast) in the Upper Anatoki neighbourhood. Fairly extensive operations by hydraulic power continue to be carried on at Parapara by the Parapara Hydraulic Sluicing Company (Limited). The ground here is very heavy and steep, great care being required to carry out the work with safety and efficiency. Future prospects appear good.

At Quartz Ranges (Collingwood Goldfield), a claim was opened out a few years ago by a company, who incurred considerable capital expenditure in bringing in an adequate water-supply. Subsequent operations by this proprietary were not commercially successful, and the property was taken over by Mr. C. Y. Fell, of Nelson, who let it to a party of tributers. I understand that the working-results are satisfactory. The works of the Slate River Sluicing Company (near Collingwood) have been improved as regards the water-supply, increased returns of gold won resulting therefrom.

In the vicinity of Westport alluvial mining cannot be generally considered a flourishing industry. About a dozen men make small wages on the beach north of the Orowaiti River, and a few others for similar results at and about German Creek. Some very fair results are being got at Cook Terrace, Fairdown. The gold won gives good average wages, and from present appearances this condition of affairs is likely to continue. Prospecting and tunnel-driving are being carried out in the locality. At Addison's several parties are working successfully. The outlook for this part of the field is considered good for a few years to come. Both alluvial wash and cemented sand are worked locally, the latter being crushed by light stamper batteries and the gold recovered by amalgamation.

The most extensive works in the neighbourhood of Charleston are those of the Charleston Beach Sluicing Company and of Messrs. Powell. These claims are close to each other, and work the sand-deposits near the beach by hydraulic sluicing and elevating, the sand being washed over a large spread of amalgamating-tables for the extraction of the gold. These two properties give employment to about sixteen persons. Other parties are extending their operations, both as regards sluicing and cemented-sand crushing; whilst the small beach claims—of which there are quite a number—appear to give good average wages. Taken all round, the industry in and around Charleston may be said to be more active than has been the case during the last year or two.

On the Buller River alluvial-mining works are carried on near Lyell. Below the township, the New Lyell Sluicing Company have taken over the claim formerly held by the Lyell Hydraulic Sluicing Company, and have been constructing a water-race for the more effective working of the property. Above the township, the Newton River Sluicing Company have added to their plant and increased their facilities for carrying out the work more efficiently. In the neighbourhood of Murchison several claims are being successfully worked. The water-supply as a whole being deficient, water-race construction and pipe-line installations have been undertaken by some of the claimholders for the purpose of obtaining a larger and more regular supply of water. Recent prospecting in this locality appears to have been satisfactory. The results are shown in further steps being taken in the direction of opening out other claims.

In the valley of the Grey River alluvial mining is carried on much on the usual lines, about sixty persons (one-half of them being Chinese) making a living in the vicinity of Blackwater, and about thirty persons (one-third being Chinese) find employment at and adjacent to Ahaura. A similar number, with approximately the same proportion of Chinese to Europeans, are engaged at Red Jack's and Kangaroo Creeks, also some twenty persons at Moonlight, and a fair number of diggers still make a living at Nelson Creek and No Town. These are independent of those employed in connection with gold-dredges. There are no extensive plants for alluvial mining in the localities mentioned. At Montgomery's Terrace and Healy's Gully hydraulic-sluicing operations are being conducted with moderate results.

Along the coast north of Greymouth Messrs. McKay and White are working on a fairly extensive scale at Barrytown with profitable results. No other claims in this section of the goldfield have been worked to any extent during the year.

The richest portions (so far as known) of the alluvial deposits at Kumara and Dillmanstown are fast being worked out, and the returns for last year show a gradual reduction in the number of men employed and the amount and value of gold obtained. Taking the areas at Kumara, Waimea, and adjacent localities commanded by the Government water-races (Waimea-Kumara), and from which the supplies of water for sluicing purposes are drawn, the following schedule affords a comparison between the average number of persons employed and the quantity and value of gold won for the periods named below:—

	Average Number of Men.	Ounces of Gold won.	Value. £ s. d.
Financial year 1903–4	77·00	7,712	27,736 16 0
„ 1904–5	56·58	5,166	20,147 8 0
Decrease	20·42	1,546	7,589 8 0

There are about a dozen men working with water obtained from a private race whose returns are not included in the above figures. A proposal has been made to drive another tailings-tunnel to enable ground as yet unworked to be sluiced, and at the end of the year some attempts to prospect this were commenced. No information has reached me as to the prospects obtained. Details of work in this locality will be found in the report of Mr. Alexander Aitken, manager of the Waimea-Kumara Water-races.

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At Stafford the Wheel of Fortune Claim is now being worked by a small local company, who anticipate making a paying concern of it. An increased water-supply is desirable. At my last visit the new proprietors were engaged on their first wash-up. I noticed that an electric current was utilised for the removal of the black sand left after streaming down.

The Minerals Gold-mining Company have sunk a new shaft and effected repairs to their water-race. The layer of wash being operated upon is not thick, but is looked upon as capable of being worked to a profit.

Humphrey's Gully sluicing-claim, owned by the Consolidated Goldfields of New Zealand (Limited), is being worked on tribute with fairly good results. There are no really large alluvial mining works in the vicinity of Hokitika except that at Humphrey's Gully, but several small claims are being worked within a few miles of the town, affording remunerative employment to a number of men. Some remarks respecting the proposal to bring water on to Seddon's Terrace appear in the report of Mr. Warden Day.

Alluvial mining at Ross is principally represented by the operations of the Mont d'Or Company, who won about £41,000 worth of gold during the year. Extensive preliminary works in the shape of cutting water-races, building dams, laying pipe-lines, &c., have been undertaken by the McCloud Terrace Sluicing Company, sixty men being employed. It is to be hoped that this new undertaking will prove successful. Practically nothing of any importance was done further south of Ross during 1904 in the class of mining under consideration, the claims at Waiho being under protection at the end of the year.

Details as to the work of most of the claims in the West Coast District appear in the report of Mr. R. Tennent, Inspector of Mines.

In the Southern District the completion of the siphons in connection with the Mountain Hut Water-race, by which water is brought on to the diggings at Maerewhenua, North Otago, has enabled ground to be worked and employment given to upwards of thirty men. It is considered that some of the claims may be worked out in about three years and that others will last for seven years. During part of the year there was a shortage of water, due mainly to breaks in the upper portions of the race. The opinion that some definite steps will have to be taken within the next five years to open the endowed lands at Maerewhenua—known to be auriferous—for mining purposes is freely expressed by miners in the locality. At present these lands are simply used as a sheep and cattle run. Comparatively little mining is being done at Livingstone.

At Manuka Creek, Waitahuna, Wetherstone's, and Waipori there is very little change to note; the hydraulic claims are being steadily worked, and are generally understood to yield good payable returns. Including Chinese, about 130 people are employed in these localities, exclusive of those employed on dredges

The extensive works of the Blue Spur and Gabriel's Gully Consolidated Gold-mining Company (Limited), near Lawrence, have been worked on the usual lines. The results of last year's work are reported to be the least remunerative in proportion to the cubic measurement of the ground sluiced since operations were commenced in 1891, the average value of the cemented wash worked being 7d. per cubic yard; 203,000 cubic yards being broken up, sluiced, and elevated for a return of 1,524·8 oz., having a value of £6,062 6s. 2d.; this being a decrease of 144·68 oz., representing a value of £570 13s. 7d., as compared with the yield of the previous year. The expenditure in wages, stores, repairs, &c., for the year was £4,558 4s. 3d., as against £4,375 5s. 10d. for the year preceding, thus showing that, although revenue decreased by over £570, working-expenses increased over £183. The general manager, Mr. J. Howard Jackson, has supplied a very full account of the working-results for the year, which is embodied in the report of Mr. E. R. Green, Inspector of Mines.

A similar class of cement wash to that at Blue Spur is being worked at Munro's Gully on the opposite watershed, three claims being at work with payable results.

Tuapeka Flat is likely to become one of the centres of hydraulic mining. Three claims have been taken up for this purpose. In connection with one of these claims a new departure is proposed from the ordinary method of obtaining water for sluicing purposes where such is obtainable at higher elevations. In this case it is intended to generate electric power at Blackcleugh Stream, convey the current to Tuapeka Flat, and utilise it for the purpose of pumping the sluicing-water. Mechanically there should be no difficulty in doing this, but the commercial side of the undertaking will be watched with much interest.

At Beaumont the Champion Company's claim continues to be worked by hydraulic sluicing and elevating. It was commenced on these lines by a small local company some seven years ago. Subsequently the present company put a dredge on the claim, but evidently this was not so successful as the hydraulic method, and the dredge has since been disposed of and removed to Southland.

The Island Block Claim has also been jointly worked by the hydraulic and dredging methods, the latter being considered very efficient. Good results have been obtained by sluicing and elevating. The dredge is admittedly on the small side for the work required, and is at present closed down. The company employ twenty men.

Messrs. Eadie and Kirkpatrick's and Messrs. Curton and Whelan's claims at Tallaburn have been amalgamated, the new proprietary being registered as the Tallaburn Hydraulic Sluicing Company (Limited).

In the neighbourhood of Miller's Flat the alluvial deposits in the Clutha River and its banks are worked almost entirely by dredges, the exception being that of the Golden Run Company, who work by hydraulic sluicing and dredging. It is intended to work the two methods in combination, using the hydraulic plant to strip the surface in advance of the dredge's operations.

At Roxburgh alluvial mining on an extensive scale is carried out by the Roxburgh Amalgamated Mining and Sluicing Company (Limited), the method being hydraulic sluicing and elevating, and the results obtained are considered good. The company employ eighteen men. Between this claim and

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the end of the gorge near Coal Creek there are three or four other hydraulic claims, employing in the aggregate some twenty persons, and a number of individual diggers make a living in the district, most of them working on or adjacent to the river-bank. Dredging is the principal method of alluvial mining carried on in the vicinity.

Bald Hill Flat continues to maintain a steady output of gold. There are three hydraulic claims here, worked respectively by Messrs. Carroll and Lynch, the Last Chance Hydraulic Sluicing and Elevating Company, and Messrs. Ewing and Dowdall. All these claims are reported to yield payable results.

Near Alexandra Mr. James Rivers is working a claim at Richmond Hill, about two miles from the town. To conserve water for the requirements of this claim a dam has been built in Speargrass Creek (a branch of the Manorburn Stream), about twelve miles from Alexandra, of which photographs are, by the courtesy of Mr. Rivers, reproduced. The grant for this dam admits of its being carried up to a height of 63 ft., but it is as yet only built to a height of 47 ft. 6 in. When photographed the water was 17 ft. deep at the dam, which is built of masonry (set in cement) on a rock foundation. Mr. Rivers has entered into an agreement with the Alexandra Borough Council to supply one sluice-head of water to the borough reservoir for public purposes, a pressure due to a vertical head of 350 ft. being obtained. It is intended to raise the dam another 15 ft., and so conserve a very much larger body of water for mining and public purposes, the exceptionally dry summer of 1904–5 having demonstrated the necessity for this work. The extra storage gained by the completion of the dam will be very great, and is considered ample to meet the requirements of mining, irrigation, and domestic purposes.

The Alexandra Bonanza Company have been working their claim at Galloway Flat by sluicing, but results are not very encouraging, the ground being rather poor. This company have a fine supply of water, which is conserved by a massive masonry dam across the Manorburn Stream at the foot of Greenland Swamp, and brought down to the claim partly in gullies, and for some sixteen miles in a large water-race. The reservoir area is granted for 1,500 acres, but the present dam (not yet carried up to its full height) impounds water over an area of, say, 800 acres, with an average depth of 8 ft. When completed to full height it is estimated the dam would throw the water back covering an area of 1,400 acres by 11 ft. deep. This information is supplied by the manager of the claim. The altitude at which the main race discharges the water into a rocky gorge overlooking the Galloway Flat is sufficient to admit of its extension for the purpose of working known auriferous ground extending for several miles—(*a*) along the side of the hills up the Valley of the Manuherikia to beyond the Township of Ophir, and even to cross the saddle between Ophir and Ida Valley, being thus available for sluicing the deposits in the locality known as Black's No. 3; and (*b*) in the opposite direction towards Alexandra, where fairly extensive prospecting operations were being conducted early in the present year by the Manorburn Gold Syndicate.

In making an examination early this year of the localities which can be commanded by the water just referred to, I was much impressed with the possibilities of a revival of remunerative mining work in the neighbourhood of Ophir especially, provided that water is brought on to the ground; but in the locality of the terraces above Galloway Flat there are also evidences of alluvial wash having been mined and carted to water for washing. It is quite clear that where this sort of work will enable a man to make a living the ground would pay handsomely with plenty of water for sluicing purposes. Without water nothing can be done, but if this can be made available to parties of miners working small claims, there is not the slightest doubt that every drop of available water would be bought, and the industry in the localities named flourish for many years to come.

Hydraulic mining at Matakanui is still conducted on very satisfactory lines, the Undaunted Gold-mining Company, the Tinkers Gold-mining Company, the Matakanui Gold-mining Company, and Messrs. Symes and Sons all doing well. The Devonshire and Drybread diggings are not much worked, owing to water not being available in any quantity during the lifetime of the claims at Matakanui. About thirty-five men are employed.

At Cambrians the principal claim being worked is that of the Vinegar Hill Hydraulic Sluicing Company. Mr. Ewing's claims at Cambrians and Shepherd's Flat have been let to parties of working miners. Some three other claims in the locality are being worked on a small scale.

At St. Bathan's the principal undertakings are those of the United M. and E. Company at the township, and the Scandinavian Water-race Company at Surface Hill, about thirty men being employed by the two companies.

Two other small claims are also worked in the vicinity. About seventy men are employed in alluvial mining at St. Bathan's and Cambrians.

Blackstone Hill and Ida Valley suffer from insufficient water-supply. This is owing largely to their altitude. Only a few miners can, therefore, find employment, notwithstanding the good quality of the alluvial deposits.

At Idaburn very little work is now being done.

For mining purposes at Naseby most of the water is supplied from the Government water-races, and during the financial year 1904–5 the value of gold won by parties using Government water was £7,442. A few claims are also worked by water from private races. The shallow and more easily worked ground in the locality is becoming rapidly exhausted, but in all probability the water-supply will, later on, be concentrated on other gold-bearing areas which may require to be worked on a more comprehensive scale than has hitherto characterised mining operations in this neighbourhood.

Hydraulic mining is conducted at Patearoa with good results, also to a small extent at Hamilton's. At Deep Stream the operations are on a fairly good scale, and working is carried on with profitable results.

The working of alluvial mines (dredging claims excepted) in the vicinity of Cromwell—including Kawarau Gorge, Bannockburn, Lowburn, and Quartz-reef Point—is somewhat on the decrease, but

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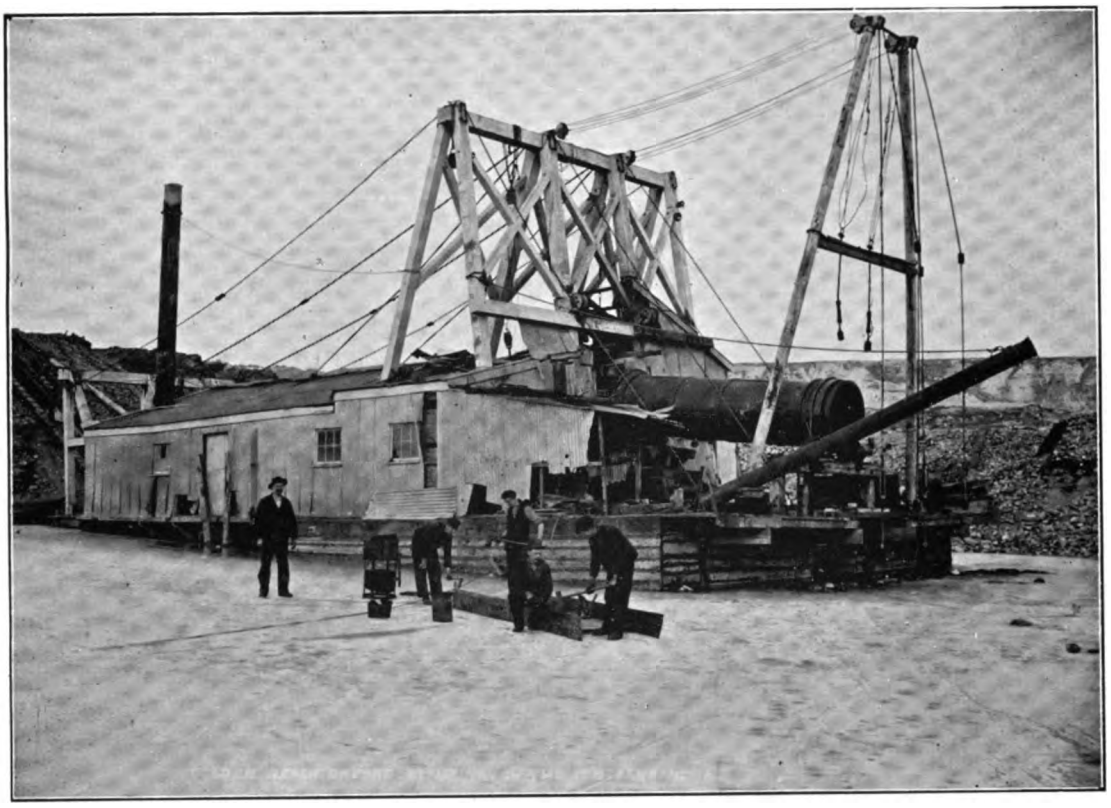
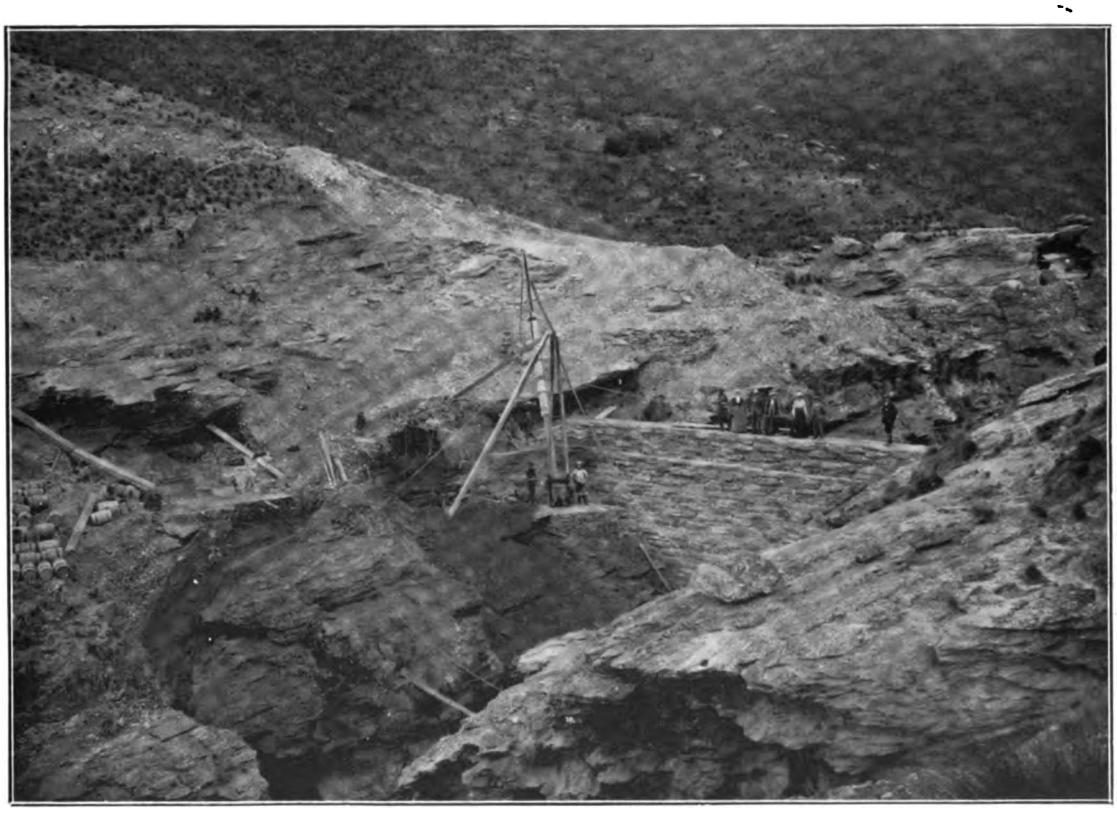


GOLDEN BEACH DREDGE, ALEXANDRA. REPAIRING ON ICE.



MR. RIVERS' DAM AT SPEARGRASS CREEK, NEAR ALEXANDRA, OTAGO. OUTER FACE OF WALL.

[*See also Report of Mr. Warden Burgess.*

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at the several places named there are small claims which afford remunerative employment to a number of men.

At Luggate, Matatapu, Criffel Face, and Cardrona alluvial mining is being carried on much as usual; nothing sensational is reported, but the several claims—at none of which can the operations be classed as extensive—appear (with a few exceptions) to give their holders a fair living.

On the Arrow River between Arrowtown and Macetown there are a few small claims in addition to one of 25 acres held by the Arrow Falls Sluicing Company. The latter company employ seven men. The other claims are worked by small parties, one of whom uses the Smith jet-pump elevator.

In the locality of Queenstown the working of alluvial deposits by hydraulic methods is not carried out anywhere on a very extensive scale, although there are several claims of comparatively small extent, and work is in progress at Twelve-mile Beach, Arthur's Point, Lower Shotover, and Moonlight, as well as at Glenorchy.

On the Shotover River above Arthur's Point there are, in addition to the larger works of the Skipper's Sluicing Company and Mr. Davis, a number of small claims (many of them being worked by the Smith jet-pump elevator) yielding returns which place their owners in very comfortable circumstances. These claims are usually worked to the best advantage in winter time when the river is low, and extend for several miles beyond Skipper's Point. In this upper reach of the river some preparations have been made for working on a scale more on a parallel with that of the Skipper's Sluicing Company than has hitherto been practised above Skipper's Point.

At Nevis and Upper Nevis a considerable amount of work is being done at the several alluvial mines, hydraulic sluicing and elevating being the principal methods of work adopted. Although a few of the claims have not turned out successful undertakings, the bulk of them appear to be payable concerns.

The Nokomai Company's claims in the Nokomai Valley continue to yield payable returns. These claims are worked on a comprehensive scale by hydraulic sluicing and elevating. Lower down the valley the Lion Claim (which is also equipped with hydraulic plant) has been worked, but unfortunately not with success so far. The property changed hands during the year, and I understand it is intended to give the claim another good trial. There are a few other claims in the locality, and the high terraces between the Nokomai Valley and Parawa undoubtedly carry good auriferous gravels, which will be worked in the future as water becomes available.

Alluvial mining at Waikaia is now chiefly represented by the dredging branch of the gold-mining industry. The Argyle Claim, which has been so successfully worked by hydraulic sluicing and elevating, is to be worked by a water-power dredge. The Winding Creek Claim and plant have been purchased, and will be worked on behalf of the Round Hill Company, the owners of the claims at Round Hill, near Riverton.

In the western portion of the southern goldfield, the Round Hill Gold-mining Company's works at Round Hill are the most extensive, and their sluicing, hydraulic-elevating, and gold-saving appliances about as perfect as any to be found in the colony. The gold in this field is very fine, and saved by amalgamation after streaming down over a plush-covered table. Value of gold, £4 per ounce. The ground operated upon is about 40 ft. deep, part of it being heavy and containing buried timber. During last year the average yield of gold won was at the rate of £1,000 per acre, and the cost of winning equal to £2 17s. 6d. per ounce of gold obtained, or 2d. per cubic yard of ground sluiced. The Ourawera Gold-mining Company's claim adjoining continues to be steadily worked under similar conditions to those at the Round Hill claims, but operations are on a smaller scale. This company has been very successful and the property pays well. The Smith Gold-mining Company are also working on a small scale in the same locality. Including about a dozen Chinese, an average of seventy-seven persons are employed about Round Hill.

Mining operations at Orepuki continue to afford steady employment to about a hundred Europeans and thirty-five Chinese, who are engaged in sluicing, underground mining, and beach-combing; but it is evident that as the present areas get exhausted miners will have to go further afield, and the prospects of mining at Pahia and also west of the small claims near the Waiau River will have to be practically considered.

A little alluvial mining is being done at Preservation Inlet and also at Stewart Island.

More details of operations in the Southern District will be found in the report of Mr. E. R. Green, Inspector of Mines, and those of the several Wardens.

Improvements in Hydraulic-elevating Plants working under Low-water Pressure (Messrs. Valpy Bros.' Method).

When in the Southern District early this year I was informed that Messrs. Valpy Bros., of Glenorchy, Lake Wakatipu, had effected considerable improvements in connection with hydraulic-elevating plants. Other engagements not permitting of my visiting the claim (as I had purposed doing) in order to see the improved plant at work, a request was made to Messrs. Valpy Bros. for particulars of it, and I have to acknowledge their courtesy in forwarding the following statement:—

"We send full description of the elevating plant with which we elevated 1 ft. for every 3$\frac{1}{7}$ ft. pressure. To secure the best results it is absolutely necessary to have large pressure-pipes; ours were 12 in. for 4½ heads of water, with 141 ft. pressure, pipe-line short and steep. The last 20 ft. of piping and right-angle bend were 9 in. in diameter, jet 3 in., goose-neck 8 in., throat 5½ in. tapering to 5$\frac{3}{4}$ in., or nearly cylindrical for 15 in. An old throat, 6 in. in diameter, was placed above the new one to lengthen the taper as much as possible. Above that was a taper pipe 3 ft. in length and running from 7 in. to 8½ in., from this to the box, 27 ft. of 9 in. pipes. The suction-pipe lifted 4 ft., making a total of 38 ft. lift for 141 ft. pressure; the length of suction-pipe greatly handicapped the lift, but was unavoidable under the circumstances. The uptake was almost perpendicular, and the jet was throwing absolutely

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true up the centre of the pipe. These two points, together with large pressure-pipes and large jet, are most important, especially to those who wish to utilise the available power to the fullest extent.

"The main difference, however, between our plant and those in general use is in the size of the uptake in proportion to the down-pipe and jet. The great object we had in view was to maintain the speed of the whole mass of water and gravel (as it passed through the throat) as far up the pipe as possible. It is perfectly obvious that a large proportion of the power of the jet is used in so concentrating the sluicing-water and gravel that it passes through the throat at a terrific speed in the form of an enlarged jet. Now, to suddenly turn this loose (so to speak) into a large space filled with water, as a 12 in. or 15 in. pipe would be, is to lose a large amount of the advantage already gained. By using a very long taper, and much smaller pipes on the top of it, the velocity is kept up, the whole of the moving mass being exactly in the path of the jet. The diameter of the pipe is only increased sufficiently to avoid excessive friction, and to allow for increasing bulk due to lessening speed. With such an uptake, when the water rises above the intake through a sudden rush in sluicing, there is never any need to allow air into the pipe, as it always clears itself very quickly without turning off any water.

"We found that even lifting 1 ft. in 3⅞ ft. the elevator never choked from above, although lifting sufficient sand at times to block the upper tail-race 20 in. in width, paved with wood blocks, and carrying over six heads of water with 8 in. fall in 12 ft. According to the *Miners' Guide* the capacity would be over 36 cubic yards per hour. The elevating-water was 4½ heads, and the sluicing-water (entirely separate) was obtained partly from leakage and partly from a stream on ground-level. We use a temporary plain board tail-race with a fall of 1 in 12 from the face to the elevator, and find that half the water required to blow the stuff in is sufficient to carry it by this method without the necessity for scraping or shovelling. Sheets of 10 gauge steel about 20 in. wide on the bottom and 6 in. or 8 in. up the sides, overlapped ½ in. and weighted down, are far better, and, though costing more, will stand years of wear.

"We have arrived at these conclusions and adopted these methods after a considerable amount of practical experimenting, and quite fail to see the use or reason for the usual large space in the intake casting, as in several small elevators we made a much smaller space in proportion was more satisfactory. We might mention that we found that when the throat and uptake were too large a certain amount of water was coming down all round the jet with considerable force."

Messrs. Valpy Bros. also inform me that they are using a very simple but exceedingly effective home-made winch and crane for dealing with large stones in the claim.

This plant, which is very cheaply constructed, is said to be able (when using about one sluice-head of water under a pressure due to a vertical head of 45 ft.) to lift 2½ tons, or roll 6 tons in an open paddock, and generally do the work of five men. It has a lift of 20 ft. and a radius of 18 ft. The crane can be moved forward by the power of the winch, which is set some distance behind. The firm regret not being able to send a photograph of this in time for inclusion in this year's report, but I hope next year to be able to give more detailed information of the plant and an illustration of the same.

DREDGE MINING.

The following statement shows the numerical strength of the fleet of gold-dredges in the colony at the end of the year as nearly as can be ascertained :—

District.	Working.	Standing.	Under Erection.	Under Removal or Rebuilding.	Being dismantled.	Total.
Marlborough, Nelson, and West Coast	34	15	3	3	...	55
Otago and Southland	152	15	...	5	12	184
Totals	186	30	3	8	12	239

The number of working dredges will represent direct employment to upwards of thirteen hundred people, and if the coal-carters, coal-miners hewing coal for use on dredges, and mechanics engaged on repairing-work for dredges, as well as other men incidentally employed be also taken into consideration, the dredging industry of the colony will be found to provide full employment to considerably over two thousand people.

As compared with the previous year, the foregoing figures show a decrease of fifteen working dredges. This is to be attributed chiefly to the West Coast District, where, during the boom of some four or five years ago, the impatience of companies to have dredges placed on their claims did not, in many instances, admit of the nature of the ground to be worked being properly and fully ascertained, nor of time being allowed engineers to design suitable machines for the work required. The natural results of all this were that (*a*) dredges were put on to claims which, from their very nature, were more suited to being worked by hydraulic methods, and (*b*) dredges much too light for the work required were adopted, and, as might be expected, the anticipated success was not attained.

Taking the West Coast District as a whole, it is not nearly so well suited for dredging as the Southern District is. The alluvial deposits are much rougher—containing a far larger proportion of large stones—and the wash is not nearly so free. These conditions require very much more digging-power and greater strength in the materials which go to make up the machinery of the dredge than are necessary on dredges working in the southern goldfields. Buried timber is also an occasional source

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of trouble. Dredges properly designed and built for the work would, in many places in the West Coast District, doubtless give very good results, but the capital cost of such machines would be undoubtedly greater than the general run of the dredges now employed. There are, however, under existing conditions, some dredging concerns on the West Coast which are very profitable undertakings. The commercial side of the subject is dealt with by Mr. Warden Kenrick so far as dredging operations throughout his sub-district are concerned, and as there are more dredges in that part of the West Coast goldfields than in any other, the average results obtained by them may be accepted as a very fair criterion for the remainder.

In the Southern District dredging is being very steadily carried on with, on the whole, very good results. The most phenomenal returns were obtained by the Electric Company's dredges, the No. 2 having won 1,265 oz. and the No. 1 1,273 oz. of gold for one week's work in each instance. This latter is the highest yield yet recorded for a single week. These dredges work at the low end of the Kawarau River, near Cromwell. A short distance below the confluence of this river with the Clutha is the claim of the Hartley and Riley dredge, which has on different occasions obtained very large returns, and for some time held the record in this respect for the entire colony.

The upper part of the Clutha River, for a few miles above Cromwell, has of late come to the front. Some dredges were placed on this section of the river a few years ago, but experience proved them to be too small and light for successful work. The present dredges are much larger and more powerful, and whilst not obtaining such large weekly returns as has been the lot of dredges on richer portions of the same river below Cromwell (and also on the Kawarau River), they have the advantage of not being nearly so much subject to stoppage by floods or troubled with such quantities of travelling drift.

Alexandra is still the chief centre of the dredging industry of Otago, a large number of dredges being at work on the Clutha River and at the adjacent banks.

Dredges are also at work in the gorge below Alexandra, but as the water in flood time is deep and the current very strong, these dredges can only work to advantage during a portion of the year. In this respect they are at a disadvantage in comparison with others above the town, where some of the claims comprise both river and bank areas, the latter being generally available for work at times when operations on the river cannot be conducted under favourable conditions. Below the gorge a number of dredges are at work on the river above and below Roxburgh; also several others lower down in the neighbourhood of Miller's Flat.

On the Waipori field nine dredges (giving direct employment to sixty men) were at work when I visited the locality early this year. Some of the dredges in this locality are worked by water-pressure.

In Southland, the valley of the Waikaka River has been proved a good payable field for dredging operations. The wash is not rough or unduly tight, nor the ground very deep as compared with some of the areas on the Clutha River, consequently the dredges do not need to be quite as large and powerful, and the capital cost is correspondingly less. Similar working-conditions apply to the other areas in Southland where dredging operations are carried on, and more particularly at Chatton, Charlton, and Waimumu. At Waikaia the ground generally is perhaps not quite so easy, but, taken all round, it does not present any working difficulties of moment. Dredging operations were attempted some few years ago in this locality without its potentialities for this class of mining being properly known, but, as a result of the success which characterised the industry in other parts of Southland, ground away from the river was well prospected, and found to be payably auriferous as well as suitable for being worked by dredges. At the end of the year there were about a dozen dredges at work or under erection in this neighbourhood, and approximately double that number in the Waikaka Valley, the total number of working dredges for the Southland goldfields being forty-six.

With very few exceptions, steam is the motive power used for driving the machinery on board gold-dredges, locomotive and return-tube boilers being general, and the engines usually of the horizontal cross-compound type. In a few instances—where water under pressure is available—the machinery is worked by water through the medium of a Pelton wheel, dredges so equipped being successfuly operated at Waipori and Cardrona, whilst a similar arrangement is being adopted at one of the Waikaia claims. Electricity has not come into use to the extent which might have been expected, probably owing to the fact that when the state of the Clutha River is most suitable for dredging—viz., in the winter months, when there is no water coming from melting snow—the water-supply, usually snow-water from the mountains, for driving dynamos for the generation of electrical current could not be depended upon. In the neighbourhood of Alexandra the Earnscleugh No. 3 dredge (a very large and powerful machine) is electrically driven, the current being generated by a water-driven dynamo, and I understand that the success which has attended this installation has resulted in the decision of the owners to similarly equip another large dredge. There appears little doubt that in such localities as Waikaka and Waikaia, in Southland, as well as Alexandra, Cromwell, Roxburgh, and Miller's Flat, in Otago, electric energy could be cheaply produced by steam-power plants, which might be erected at a convenient lignite-pit. Fuel would thus be handy and cheap, and the most modern and economically worked steam-plant could be adopted, the electrical current being conveyed to the dredges by cables in the usual way. Such an arrangement could not fail to prove more economical than the present system, under which heavy expenses in cartage of coal (as well as loss of time in handling the same) and the wages of a stoker are necessarily incurred. If dredge-owners in the districts referred to would form electrical-power companies for the purpose of meeting their own requirements, there is every reason to think that such undertakings would be commercially successful.

In one instance, where coal-carting was very costly, the installation of oil-engines was decided upon by the owners.

The question of stripping off the surface soil and overburden above the auriferous wash where dredges are working on flats (*e.g.*, the Southland, Waipori, and a few other dredging-fields) has not, to my mind, received anything like the amount of practical attention to which it is, by reason of its

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importance, entitled. There is no gainsaying the fact that the present practice of passing soil, clay, and gravels down the sluice-boxes at one and the same time is capable of being very materially improved upon with considerable advantage. It is well known that in the localities alluded to the gold is fairly fine, and in many instances may be classed as "very fine" when considered by the standard usually applied to alluvial gold. When buckets come up laden with a mixture of clay, puddle, and auriferous gravel, and the whole lot are washed down the sluice-box together, some of the gold adheres to the plastic or semi-plastic material, the result being that, instead of being separated and recovered, this gold is carried off and deposited among the tailings, and therefore lost.

The extent of this loss is not recognised so fully as it might be, but if dredge-owners will go to a little trouble in the matter they can easily ascertain what the loss is. I submit the following suggestion: Make a square box 3 ft. long, 3 ft. broad, and 3 ft. deep; inside measurements. When level-full, the contents will be exactly a cubic yard. Half fill it with water, and then, say, once in every hour, throw in a dish of tailings, repeating this until the box is quite full and the surplus water has run off. The tailings, settling in the water, will be very compact by the time the box is full, but consolidation may be aided by ramming to some extent. Now cradle these tailings carefully, and weigh the gold saved by the cradle. This will be a fair index of the loss which is constantly going on, and I may remark that, acting on a suggestion of this kind some time ago, one dredgemaster in charge of a dredge working gravels overlaid by a bed of clayey matter made the experiment, and found the average loss to be 2 gr. per cubic yard.

A little calculation will show how a loss of this kind works out: Suppose a dredge is lifting 50 cubic yards per hour for an average of twenty hours per day, and allowing for holidays, stoppages for repairs, &c., we take four and a half working-days per week all the year round. This gives 4,500 cubic yards of ground moved per week, and, assuming the loss to be 2 gr. per cubic yard, the weekly loss is 18 oz. 15 dwt. of gold, which, at the moderate rate of £3 15s. per ounce, represents the sum of £70 6s. 3d. Assuming, however, that the loss is only half the quantity stated, at 1 gr. per cubic yard it means a weekly loss of £35 to an average-sized dredge, and I have very little doubt in my own mind that there are dredges now at work at which something like fifty pounds' worth of gold per week will be found to be going over the tail shoots, if careful tests of the tailings are made somewhat on the lines suggested.

What I wish to convey is this: That (*a*) in the light of gold-saving alone, it will, in my opinion, pay to strip the overburden—where such is of a clayey nature—off the top of the auriferous wash, and (*b*) the land can be restored to a much better state than is now being done. There has been an outcry in some quarters about valuable land being destroyed for agricultural purposes by gold-dredging operations. This has undoubtedly been the case in a few instances, but in others, where swampy marsh land has been dredged, the effect has been to drain and sweeten it, and it is now growing sweet grass and clover where rank sour grass and rushes grew before. At the same time, it cannot be claimed that this land has been left in anything like so good a condition as it might have been had advance stripping been practised, and the soil and subsoil, &c., deposited on the gravel tailings instead of their all being mixed up as at present.

At Waikaka, Southland, trees have been planted on the tailings left by one dredge working on private land. At my last visit to the locality I carefully inspected this plantation, and found the young trees healthy and growing well. The idea of planting some of the tailings-areas which were formerly swamp lands with native flax suggested itself to my mind, and I submit this as offering a means of profitably utilising the ground from which the alluvial gold has been won.

Improvements in Dredges.

Roberts's Silt-elevator for Dredges.

This elevator was designed to obviate the great wear-and-tear which takes place with the ordinary bucket or "baby" elevator which was originally first introduced by Mr. Edward Roberts, C.E., of Dunedin, on the dredge "Moa," at Alexandra, and which has been largely adopted by other engineers. It is well known that any piece of machinery having a number of separate parts working in sand, or water heavily charged with sand, very quickly wears out, and this has been the case in a marked degree with silt-elevators on dredges. Mr. Roberts early foresaw this, and in 1899 patented the wheel-elevator, claiming in the patent to receive the sand in any manner at the bottom of the wheel, and discharging it at the top, so that the wheel would be adapted for dipping the material from a trough or receiving it direct from the sands-shoots as in the plan illustrated. The latter plan is for many reasons the best, but principally because there is no friction in moving the wheel through a body of sand and water, and the wheel may be stopped at any time without any danger of silting up and the breakages consequent on the restarting of the wheel.

In the design illustrated (which is similar to the wheels used on the Golden United, Sullivan's Lead, and Golden Run dredges), the wheel A is fixed in a framework alongside the main elevator, and is capable of being raised and lowered with the elevator-frame. It is driven by gearing and belting from the main elevator countershaft and runs at a slow speed. The wheel-rim is formed "trough shape" with internal buckets. The sand and water from the tables being delivered by the sand-shoot C into the lower part of the wheel, and, the wheel revolving at a sufficient speed, the water and sand is taken away as fast as it is delivered from the sand-shoot, and there is consequently no boiling. It is then carried up slowly, the sand settling in the buckets and the surplus water being caught off the lips of the buckets by a collector B having suitable vanes and delivering the water at the bottom into the paddock. By the time the buckets reach the top of the collector the last of the water is discharged and the sand begins to deliver on the apron or shoot D, sliding down this shoot into the main elevator-buckets in a continuous stream. There are no moving parts except the wheel and shaft, and no wear. The wheel also, being suspended freely, and having no parts in frictional contact with the material, can be of very light construction.

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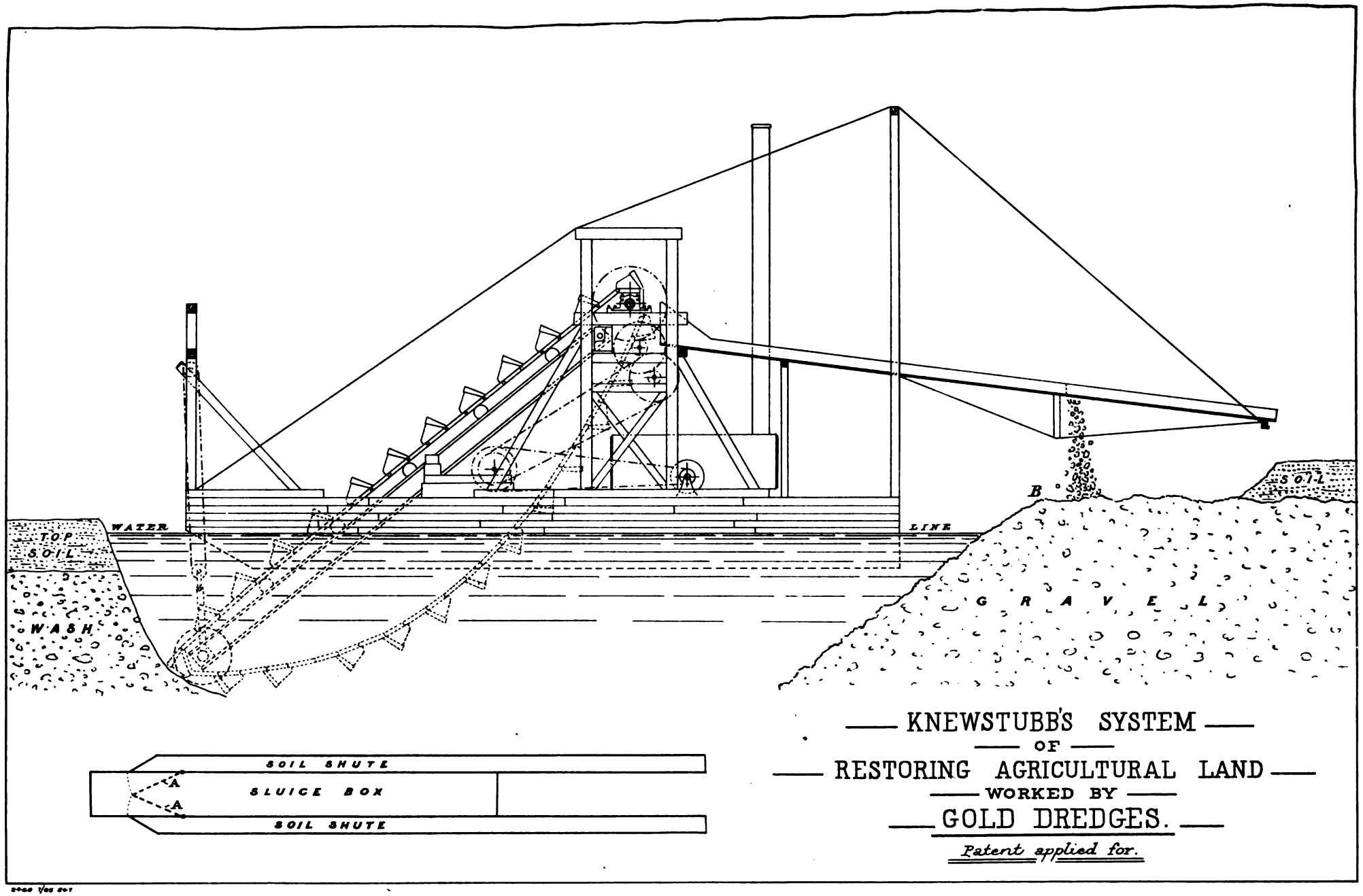

KNEWSTUBB'S SYSTEM
OF
RESTORING AGRICULTURAL LAND
WORKED BY
GOLD DREDGES.

Patent applied for.

C.—3.

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Watt and Nisbet's Patent Stopper for the Prevention of Losing of Buckets on Dredges.

This is a simple contrivance set upon a bucket-ladder of a dredge, placed at right angles with the ladder, and consists of a shaft working in three bearings. On the shaft are secured two "bell-crank" levers, having a light and a heavy end. These crank levers are so placed on the shaft as to come exactly between the connecting-links, and in a line with the centre of the bucket-link. The light end of the bell-crank being uppermost and working against the under-side of the bucket-link, the lower or heavy end of the bell-crank is made sufficiently heavy to bring it to a position of rest as shown in full lines on plan. When in this position it will arrest the runaway buckets before they have travelled more than 8 in. or 10 in. The dotted lines show the chain of buckets having travelled a distance of 8 in., and it will be seen that the bell-crank has assumed a horizontal position, and is on the point of release from the bucket-links. There should not be less than two sets placed on each ladder, so that one set will always be in position to arrest the runaway buckets.

The arresters are placed in the centre of the ladder and at or near the lower end; the centre ladder-roller must be a flanged one, so as to guide the bucket-chain centrally.

By reference to the plan it will be easily seen that the "tumblers" or "cranks" shown in full lines are at rest, and shown in dotted lines, marked, not only the advance of the buckets, but the tumblers on the point of release, the buckets having advanced that distance. A set further up the ladder would be at the point of release at the end of the bucket-link, and the set lower down would just be coming into contact with the front end of the bucket-link. By this means there is always one in position to arrest the buckets; but, should the chain break, one or more will immediately fly into position.

There are disengaging-levers not shown on the plan, these levers are to disengage any one or all of the bell-crank tumblers. They are placed within easy reach of the winchman.

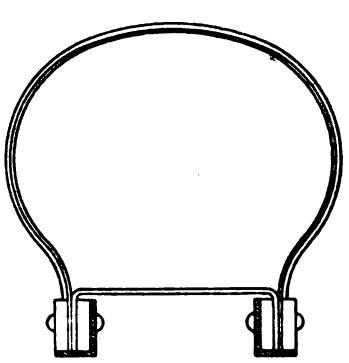
Gillespie's Dredging-link Shoe.

Mr. Thomas Gillespie, dredgemaster of the Happy Valley Dredge, Happy Valley, Lawrence, Otago, has patented a very simple arrangement by which the working-life of an ordinary dredge-bucket "runner" can be greatly prolonged, and at the same time effect considerable diminution in the ordinary costs of repairs.

Hitherto, the bucket runners have been subjected to enormous friction, and when somewhat worn down have been reversed until worn down at the other side to such an extent as to become useless. By the adoption of the improvement under notice, the runner itself is relieved from wear by a shoe of $\frac{5}{8}$ in. angle steel, secured to the runner by a couple of rivets, which are easily removable when it is necessary to remove the old shoe and substitute a new one. In the case of old buckets which have been at work in the ordinary way, shoes of angle steel can be fitted to cover the worn part of the runner, which thus becomes virtually equal to new.

It is claimed that the cost of fitting a set of buckets with these shoes is not a quarter of the cost of replacing a full set of runners, and also that the loss of time in fitting or renewing the shoes is trifling compared with that of entirely renewing a set of runners, thus effecting a double saving.

This invention was brought under my notice at my last visit to Lawrence; and I understand the invention has been adopted on some of the dredges in the locality, and has given entire satisfaction.



Restoration of Land after being worked by Gold-dredges.

Mr. F. W. Payne, Consulting Engineer, Dunedin, has kindly supplied a drawing and description of a dredge (Knewstubbs' system) so designed as to strip off the surface soil, &c., overlying the gravel wash in advance of the dredging-work proper and to deposit the soil on the tailings well behind the dredge. The invention comprises a new form of sluice-box, for which patent rights have been applied.

The replacement of the top soil or overburden on the gravel is carried out by a simple arrangement of combined sluice-box and soil-shoots, as shown in plan. The two outside shoots carry the soil, and these, being longer than the sluice-box, convey the soil to a much greater distance than the tailings, and naturally deposit the soil on the top of the latter. In working the dredge, operations are conducted alternately in the soil and the gravel, the work of stripping being carried on without lifting the auriferous gravel. The drawing shows the dredge in a position ready for receiving the buckets to strip the top soil to a depth just sufficient to allow flotation of the pontoons. Stripping is carried on across the whole width of the paddock-face and as far forward as the buckets can conveniently work, the soil being carried over and deposited on the gravel-tailings by means of the soil-shoots until the point B is reached. The dredge is then dropped back and the gravel-wash dredged separately.

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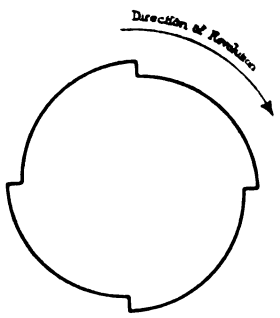
When the top soil is being worked the doors AA are shown by dotted lines as closing the sluice-box, and diverting the material to each of the side shoots. When the dredge is put to work on the gravel these doors are moved so as to close off the side shoots and open the sluice-box. The side or soil shoots are preferably lined with flat plates, and, when the gravel is being treated, serve as platforms for the man attending to the sluice-box.

It is recognised that, in addition to the great advantage of replacing the soil on the tailings, the treatment of the wash by itself—instead of being intermixed with soil, clay, &c., as is usual—is materially conducive to the saving of gold now lost by the ordinary methods.

The Blackwater River Gold-dredging Company (Limited) have adopted a novel method of giving the gravel a shaking in its passage down the screen. Instead of the periphery of the screen being truly circular as is usual, there are four "set-offs" of 4 in. each at regular intervals, the design being to give the gravels four drops of 4 in. each in every revolution, and thus prevent the material which is being screened from sliding down the screen in lumps. The effect would naturally be to assist in the disintegration of gravels which might be held together by any cementing-material. This arrangement is illustrated by accompanying sectional sketch.



ACCIDENTS AND FATALITIES.

During the year 1904 there were a total of fifteen fatalities in connection with gold-mining operations as compared with nineteen for the previous year. The whole of them, as well as others which were not fatal but considered at the time to be sufficiently serious to be reported to the Department, have been fully inquired into.

One accident in particular, which was somewhat unique in its character, may be especially referred to. This occurred on the 14th March last, at the Energetic Mine, Reefton. This mine is worked in conjunction with the Wealth of Nations Mine, but the shaft of the former is sunk to a greater depth than the lowest level of the latter. Some four months prior to the accident a winze had been sunk from the Wealth of Nations Mine, and at the time was partially filled with water. A level was driven from the Energetic shaft from a depth lower than the bottom of the winze referred to, and when this had reached a sufficient distance, a rise was put up for the purpose of tapping the water in the winze and subsequently holing through for ventilation. When the machine-drilled borehole designed to let off the water was pricked through by the drill into broken ground at the bottom of the winze, the water came away very gently (the drill being left in the hole), and either gave off, or carried with it, a noxious gas, which suffocated the two men working in the rise and also a third man who was engaged in rescue-work. The lights used by the men were not, so far as is known, appreciably affected, but the gas had all the effects on explorers usually experienced by persons inhaling sulphuretted hydrogen, and also blackened metal watch-cases and similar articles. These facts point to the gas liberated being to a great extent, if not entirely, sulphuretted hydrogen, and its presence may probably be accounted for by chemical action resulting from the decomposition of pyrites in the water being at such a stage as to produce the gas. Had the connection been made months before or after, no disastrous results might have occurred, as on the one hand sufficient time would not have elapsed for the necessary chemical changes to have taken place, and on the other hand, time would doubtless have admitted of the completion of the change and of the gases gradually escaping or being neutralised. It is well enough known by seamen that water conveyed in casks or tanks will frequently get so bad as to be unfit for use, but if left alone will come all right again. This is mentioned as a possible parallel to the condition of the water which had accumulated in the winze. It has been a common-enough thing in this and other mining districts to tap water contained in winzes by boreholes from lower levels without any ill effects whatever, and such a practice might be carried out for a century or more without any accident. In my own experience and practice it has been found necessary in several instances to drain very large areas of old workings—in comparison with which the accumulated water in a winze is a mere drop in a bucket—by boring from lower levels, no other means being available, and this, too, has been accomplished without the slightest danger of any kind.

The accident referred to has caused suggestions to be made for legislative action requiring accumulations of water to be first baled or pumped, and the place where such accumulation existed to be ventilated before being holed into. Really practical men of experience of course recognise that such suggestions are not applicable in all cases — in fact, it is often absolutely impossible for their being given effect to—and that legislation in the direction indicated would be ineffectual. The Inspectors of Mines have been instructed to draw the attention of mine-owners or managers to the question, and to require, where such a course is reasonably practicable, that places containing accumulations of water shall be baled out and ventilated before other workings are holed into them.

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It is just as likely that the men employed in baling accumulated water would suffer from poisonous gas as those men did at the accident under notice, provided that similar conditions exist as regards chemical action.

The following tabulated statement shows the number of fatal and serious non-fatal accidents which were reported to the Department during the year :—

Class of Mining.	Northern District.		West Coast District.		Southern District.		Total.	
	Fatal.	Non-fatal.	Fatal.	Non-fatal.	Fatal.	Non-fatal.	Fatal.	Non-fatal.
Quartz	3	2	3	4	...	1	6	7
Hydraulic and alluvial ...	...	...	...	...	5	3	5	3
Dredging	...	...	...	3	4	5	4	8
Totals	3	2	3	7	9	9	15	18

MINERALS OTHER THAN GOLD.

Scheelite.

This mineral is found associated with quartz at Top Valley, near Blenheim, and at Macrae's, Mount Highlay, Bendigo, and Glenorchy, in Otago. At present it is only being worked in the vicinity of Macrae's and Mount Highlay, Messrs. W. and G. Donaldson alone having in the past made a commercial product of the mineral, which they separate from the quartz sands by concentration.

As the demand for scheelite containing not less than 60 per cent. of tungstic acid is steadily increasing, and much greater quantities than have hitherto been available are now being inquired for, the matter is receiving greater attention in the district, and it appears more than probable that the export of this mineral will show a decided increase within the next few years.

Platinum.

Small quantities are obtained at the Round Hill Gold-mining Company's works at Round Hill, Southland. A little is also reported as being present in the wash at the Takaka hydraulic claim, but up to the present no attempt has been made to save it commercially.

Hæmatite.

Hæmatite paint is made from the iron-ores of Parapara, and also at Thames. The crude mineral is also supplied from a deposit at one of the Southland lignite mines for use as a pigment for colouring paper at the Mataura paper-mills.

Rock Phosphate.

The rock-phosphate deposits near Milton, Otago, are being worked, and the stone, after calcination, is treated at the Burnside Chemical Works and put on the market as a fertiliser.

Copper.

Mr. T. A. Turnbull, the mining engineer in charge of the works now being carried on by the Mineral Belt Copper-mining Company, Nelson, has furnished the following particulars of the undertaking :—

"The Mineral Belt Copper-mining Company (Limited) commenced operations upon the Aniseed Valley section of their property in January, 1904. The area is almost identical with that held by the old Champion Copper Company, and comprises about 1,000 acres on what is known as the 'mineral belt.' At their United Mine No. 2 level has been cleared out and the ore-deposits and indications noted. Levels 3 and 4 had collapsed, as had also No. 5, but the latter has been cleared and retimbered for 360 ft. For 300 ft. this level is but a shallow one, but for 160 ft. it follows the cap of what seems to be an extensive ore-deposit. This level is being extended into the hill, and the ore found in No. 2 level has apparently lived down, though much disturbed by an intrusion of diabase rock. The disturbed ground has been driven through, and the Company are well satisfied with their prospects at this level. At 150 ft. below No. 5 the company are putting in a drive to develop the ore cut in the levels above, and to prove its extent and value. So far as can be judged at present they should have no trouble in maintaining a fair grade of output, as assays range from 5 to 26 per cent. of copper, and the ore-bodies are anything from 2 ft. to 10 ft. wide. At Jackson's Lode, on the opposite side of the valley, high-grade ore has been found and traced by trenching, but very little development-work has been done here. The United North (formerly known as the Stinking Lode) and the Mount Claud Lodes are practically untouched. At the head of the valley the Monster Lode is being tested by a crosscut being put in 105 ft. below the outcrop. In one place on the surface it can be seen that this lode, since its deposition, has been fractured transversely, and the fissure has been filled by a redeposition and concentration of ore assaying 27 per cent. of copper. The company are proceeding cautiously, and taking steps to obtain reliable data as to the ore-deposits before going to the expense of erecting smelting-works. Twenty men are employed at present."

Deposits of copper-ore are known to exist at several places in both Islands, but their extent and value are, generally speaking, as yet unproved. A syndicate has been formed for the purpose of exploiting the deposits at Moke Creek, near Queenstown, Otago.

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Petroleum.

A borehole has been put down at Moturoa, near New Plymouth Breakwater, to a depth of 2,100 ft. Before reaching this depth a blower of natural gas and water was met with, and later on the strata drilled through gave evidence of the ground carrying crude petroleum to some extent, the triturated material brought up being quite oily and having a strong smell of petroleum. In consequence of the capital being exhausted work was stopped when the depth mentioned was attained. Since then the work has been visited by the Director of the Geological Survey and myself, and at the time of writing is being continued for a distance of 300 ft. or thereabouts under Government subsidy. The hole is cased with wrought-iron tubing 6 in. in diameter.

Cinnabar.

The property near Waitahuna (Otago) has changed hands, and the new proprietary contemplate further prospecting and development.

Prospecting Operations.

Tin is being prospected for near Pegasus Bay, Stewart Island, and a discovery of greenstone at Milford Sound is reported.

SCHOOLS OF MINES.

These institutions have been carried on during the year much on the usual lines, and the instruction given has been of considerable service to a number of students whose ambition is to qualify for responsible positions in connection with mining and metallurgical work. The annual reports of work done, &c., at the various schools during the year 1894, follow.

THAMES SCHOOL OF MINES.

The Director, Mr. O. G. Adams, A.O.S.M., reports as under :—

I have the honour to report as follows on the work done at the Thames School of Mines during 1904.

The depressed state of the mining industry in this district has been responsible for a rather low attendance at the school, but those who did attend did good work. Towards the end of the year the attendance improved, and at the time of writing this report—February, 1905—the attendance has very materially increased, so that there is every promise of a busier and more successful year to follow.

The attendances are given below in tabulated form.

	First Term.	Second Term.	Third Term.
Class attendances	52	51	58
Saturday science class	32	25	28
Total attendances	84	76	86
Registered students	18	19	25

During the year several excursions were made in connection with the mining, surveying, and geology classes. The Easter holidays were spent at Karangahake and Waikino, where, through the courtesy of the several mine and battery managers, the students were enabled to inspect the underground workings and the batteries.

The results of the Schools of Mines Examinations held in December are as follows :—

Name of Student.	Practical Chemistry (Senior).	Practical Chemistry (Junior).	Theoretical Chemistry (Senior).	Theoretical Chemistry (Junior).	Theoretical Chemistry, Elementary.	Practical Assaying (Senior).	Practical Assaying (Junior).	Practical Assaying, Wet (Senior).	Practical Assaying, Wet (Junior).	Mineralogy.	Metallurgy of Gold and Silver.	Mining.	Ventilation.	Pumping and Winding.	General and Mining Geology.	Land and Mining Surveying.	Mathematics.	Mechanical Drawing.	Explosives.	Electricity.
L. Andrew*†	68	..	70	..	..	..	..	..	..	..	83	79	75	..	78	75	45‡	85	..	..
Y. Booker	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	87	..	72	..	..
C. N. Turner	..	46	..	61	..	..	64	..	..	..	..	..	..	..	..	..	34	89	..	†
L. Kitching	44	..	..	63	..	63	..	42	..	..	78	..	59	..	65	88	53	..	..	..
G. W. Davies	..	64	57	..	..	41	..	..	..	..	76	..	..	..	..	..	..	..	78	..
A. J. Alexander ..	..	..	..	..	..	..	21	..	..	..	..	..	..	..	..	..	..	..	..	..
L. Adams	..	..	..	..	..	59	..	..	..	..	..	..	..	..	..	..	..	..	..	..
A. Baker	..	..	..	..	..	54	..	..	..	..	..	..	..	..	..	..	..	..	..	..
J. Rickard	..	..	..	..	47	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
N. Wylie	..	..	..	..	58	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
S. Grigg	..	..	..	..	66	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
A. Wylie	..	..	..	..	29	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
H. Baker	..	..	..	..	42	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
O. Wright	..	..	..	..	58	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
J. G. Poulgrain ..	..	..	..	..	52	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
P. Williams	..	..	..	..	45	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
F. Kneebone	..	..	..	..	23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
J. Paul	..	..	..	..	43	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
M. Grigg	..	..	..	..	46	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
E. G. Ellis	..	..	..	..	50	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
E. L. Trower	..	..	..	†	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
S. C. Reid	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	74	..	..	..
T. Mangan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	63‡
E. Thornton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	†
W. J. Paterson ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	†
P. Payne	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	†
A. Strong	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	49
G. L. Thorburn ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	†

* Scholarship candidate. † Fails. ‡ Senior.

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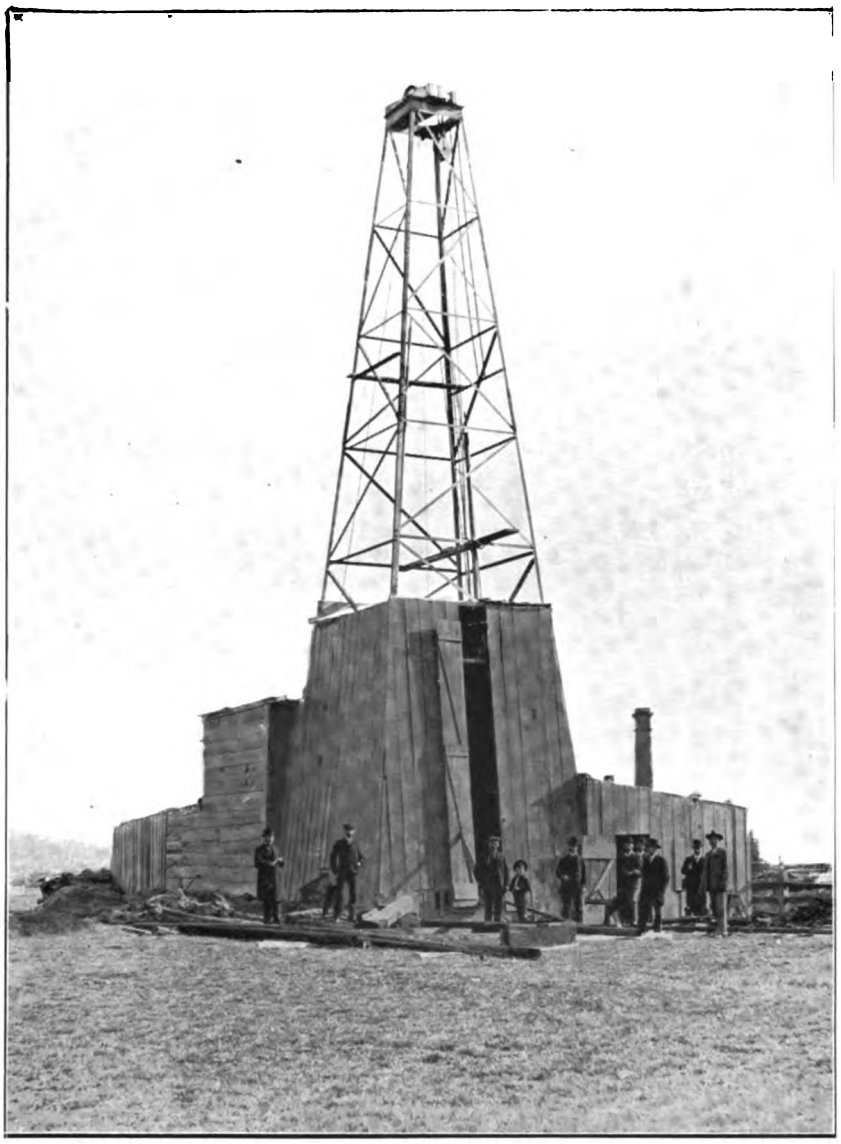
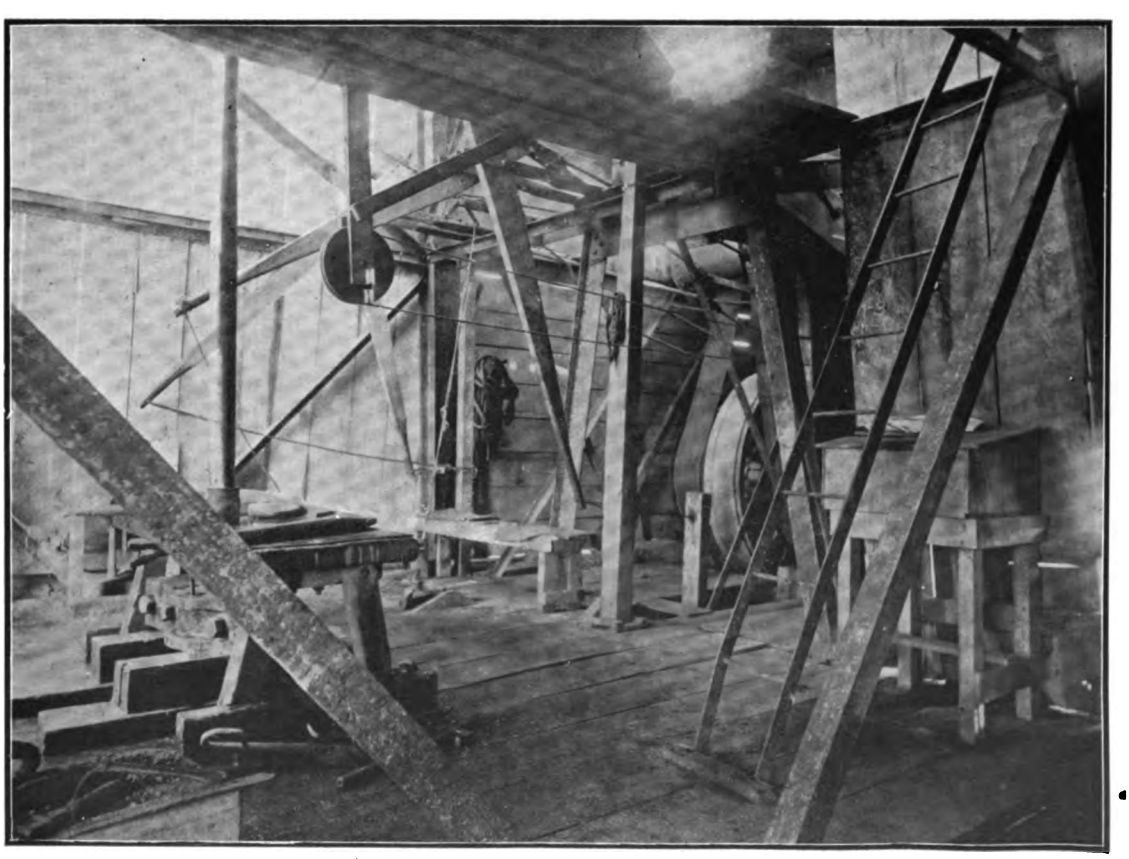


DERRICK AT MOTUROA PETROLEUM COMPANY'S WORKS, NEAR NEW PLYMOUTH.
BORING FOR PETROLEUM OIL.



INTERIOR OF DERRICK HOUSE, MOTUROA PETROLEUM COMPANY'S WORKS, NEAR NEW PLYMOUTH.

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There were thirteen first-class passes, fourteen second-class, and fifteen third-class.

During the year 200 assays were made in the assay department by the staff. This is an increase of thirty-five over the number in 1903. This number does not include all the assays and analyses made in connection with the experimental plant. Of the 200 sixty-nine were done for the Mines Department. A tabulated list of these follows :—

Laboratory No.	Description.	Locality.	Sender.	Result.		
				Gold per Ton.	Silver per Ton.	Value per Ton.
				Oz. dwt. gr.	Oz. dwt. gr.	£ s. d.
3127/3 (1)	Black flinty stone ..	Ruamahunga River	Mr. Hogg, M.H.R. ..	Trace ..	Trace ..	Nil.
" (2)	Yellow flinty stone ..	"	" " ..	" ..	" ..	"
" (3)	Green flinty stone ..	"	" " ..	" ..	0 2 2	"
3128/1 ..	White quartz	Wairau Valley ..	Mr. D. Robertson ..	0 1 16	0 1 16	0 6 10
3133/1 ..	..	Reef Hill, Masterton	Mr. Hogg, M.H.R. ..	Trace ..	Trace ..	Nil.
3137/21 (1)	Feldspar rock	Hokitika Prospecting Association	The Warden, Hokitika	0 0 20	0 7 18	0 4 0
" (2)	Greensandstone ..	Ditto	" "	0 0 20	0 12 14	0 4 7
" (3)	Actinolite	"	" "	..	..	..
" (4)	Ferro-magnesian mineral	"	" "	Trace ..	0 7 0	0 0 8
" (5)	" "	"	" "	..	..	..
" (6)	" "	"	" "	..	..	..
" (7)	Greisen	"	" "	0 0 10	0 12 14	0 3 1
" (8)	Chlorite rock	"	" "	..	..	..
" (9)	Quartz	"	" "	0 9 5	0 12 14	1 18 1
" (10)	Tourmaline rock ..	"	" "	..	..	..
" (11)	Igneous decomposed rock	"	" "	..	..	..
" (12)	Ferro-magnesian rock (decomposed)	"	" "	Trace ..	0 7 0	0 0 8
" (13)	Garnets and iron-oxide ..	"	" "	0 0 10	1 7 17	0 2 5
" (14)	Ferro magnesian rock ..	"	" "	..	..	..
" (15)	Quartz and ferro-magnesian rock	"	" "	0 0 10	0 12 14	0 3 1
" (16)	Feldspar and talc (decomposing)	"	" "	..	..	..
" (17)	Quartz, coloured by iron	"	" "	0 0 10	1 0 4	0 3 8
" (18)	Magnetite	"	" "	Nil ..	Nil ..	Nil.
" (19)	Feldspar	"	" "	..	..	..
" (20)	Tourmaline in rock ..	"	" "	..	..	..
" (21A)	Pyrites in ferro-magnesian rock	"	" "	..	..	..
" (21B)	Magnetite grains in rock	"	" "	..	..	..
3140/1 ..	Lead-ore	Wangapeka District	Mr. H. Owen ..	0 7 13	38 11 7*	5 7 3
3145/2 (1)	Quartz	Napier District ..	Mr. James Hay ..	Traces ..	0 2 12	Nil.
" (2)	"	" ..	" ..	" ..	0 3 8	"
3155/3 (0)	"	Wilberforce District	Mr. A. H. Richards	0 1 6	Traces	0 5 0
" (3)	"	"	"	0 6 7	Trace ..	1 5 2
" (4)	"	"	"	1 17 19	0 5 1	7 11 8
3161/1 ..	"	Te Puke ..	Mr. J. A. Clark ..	0 8 9	1 17 19	1 17 2
3163/3 (1)	"	Macrae's Flat ..	Mr. W. Donaldson ..	0 13 20	0 3 8	2 15 8
" (2)	Concentrates	" ..	" ..	0 2 12	0 1 6	0 10 2
" (3)	Tailings	" ..	" ..	0 1 6	0 0 17	0 5 0
3182/4 (1)	Quartz	Takaka, Nelson ..	Mr. W. Baird ..	Traces ..	Traces	Nil.
" (2)	"	" ..	" ..	" ..	"	"
" (3)	"	" ..	" ..	" ..	"	"
" (4)	"	" ..	" ..	" ..	"	"
3183/1 ..	"	Takaka	Mr. J. W. Soper ..	" ..	"	"
3185/5 (1)	"	Mangonui ..	Mr. Houston, M.H.R.	" ..	"	"
" (2)	"	" ..	"	Slight traces	"	"
" (3)	"	" ..	"	"	"	"
" (4)	"	" ..	"	Traces ..	"	"
" (5)	"	" ..	"	" ..	"	"
3195/1 ..	"	Marlborough ..	Mr. M. Lyons ..	0 10 2	0 3 18	2 0 8
3206/3 (1)	White quartz	Wangapeka ..	Mr. R. McGregor ..	Traces ..	Traces	Nil.
" (2)	Quartz and country	" ..	" ..	" ..	"	"
" (3)	Nodule of pyrites ..	" ..	" ..	Small amount	"	"
3209/1 ..	Concentrates	Wangapeka ..	Mr. H. Owen ..	Traces ..	3 10 14	0 7 0
3213/12 (1)	Flint	..	Beattie, Lang, and Co.	Nil ..	Nil ..	Nil.
" (2)	Gritstone	..	"	Traces ..	Traces	"
" (3)	Jasperoid quartz ..	..	"	" ..	"	"
" (4)	Quartz	..	"	" ..	"	"
" (5)	Jasper	..	"	Nil ..	Nil ..	"
" (6 & 7)	Basalt	..	"	" ..	" ..	"
" (8)	Flinty quartz	..	"	" ..	" ..	"
" (9)	Basalt	..	"	" ..	" ..	"
" (10)	Flinty quartz	..	"	" ..	" ..	"
" (11)	Basalt	..	"	" ..	" ..	"
" (12)	Flinty quartz	..	"	" ..	" ..	"
3215/3 (1)	White quartz	Renwick ..	Mr. B. McGregor ..	Traces ..	Traces	"
" (2)	"	Marlborough ..	" ..	" ..	"	"
" (3)	"	" ..	" ..	" ..	"	"
3216/2 (1)	"	Queen Charlotte Sound	Mr. J. Hebberley ..	" ..	"	"
" (2)	"	Ditto	" ..	" ..	"	"
3221/1 ..	Quartz and pyrites ..	Greymouth ..	Mr. J. McAulay ..	" ..	"	"

* Galena 12·64 per cent.

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Experimental Plant.

A table of the parcels of ore treated in the battery follows :—

Laboratory No	Description.	Locality.	Sender.	Weight, Dry.	Assay Value per Ton.	Bullion saved.	Value per oz.	Percentage saved.		
								Gold.	Silver.	Value.
				Lb.	£ s. d.	Oz. dwt.	s. d.			
P. 186	Quartz, with some mineral	Waimangu S.C., Whangamata	J. Richard..	4,222	49 17 0	133 3	12 5	90·5	72	88
P. 188	White quartz, clay, iron-oxides, black manganese-oxide	Huanui Claim, Waitekauri	J. Campbell	4,770	5 14 4	20 15	11 3	97·6	87·7	95·9
P. 190	Quartz, with iron-oxides	Lord Plunket Claim, Whangapoua	T. Barron ..	1,400	3 0 4	1 8	11 2	36	24	34
P. 191	Coarse sand from buddles	Maratoto ..	W. S. Styak	1,950	5 12 0	22 11	4 2½	99	95·5	97·5

Lot P. 190 was treated by cyanide, the others by amalgamation. Three other lots were received for treatment: one was too poor to proceed with, and the other two were ashes, old pots, &c., from smeltings, and were treated in the berdan. The percentage extraction was not determined on these.

Governing Body.

The annual general meeting was held at the School of Mines on Wednesday, the 15th February, 1905. The President, Mr. M. Paul, presided.

The following officers and members were elected for 1905. President, Mr. William Baker; Vice-president, Mr. G. S. Clark; Hon. Treasurer, Mr. E. F. Adams; members of Council—Messrs. George Comer, John Ensoll, Henry Lowe, Matthew Paul, George Warne, E. F. Murphy, and R. W. Powell. Mr. Albert Bruce is permanent Hon. Secretary.

The staff, consisting of Mr. A. H. V. Morgan, M.A., assistant lecturer; Mr. E. G. Wright, lecturer on electricity; and Mr. T. J. Mountain, licensed surveyor, drawing-master, have all performed their duties in a most efficient manner. My thanks are due to them for this, and for the hearty support they have afforded me.

The Museum.

This is well stocked with exhibits, and is open to the public every Thursday afternoon during the school session. Visitors to the district are admitted at all reasonable hours, on application at the school.

COROMANDEL SCHOOL OF MINES.

Report of the Council.

Your Council have much pleasure in submitting the following report upon the past year's operations :—

The number of enrolled students may be regarded as satisfactory under existing conditions, the students generally have evinced a keen and intelligent interest in the various class-work, and the results of the December examination show they have a thorough grasp of the subjects.

During the past year the school apparatus has been materially added to by the acquisition of a complete set of appliances for illustrating the science of electricity and by the purchase of a first-class microscope for the benefit of students especially in the subjects of petrology and geology; these purchases were made out of a special grant made by the Mines Department for the purpose. A dynamo was purchased at the same time and the class-room, laboratory, balance-room, and premises generally installed with electric light out of ordinary funds; the complete installation serves a two-fold object: by giving students ocular demonstration of how electricity is generated for practical purposes, and by lighting the premises at a minimum cost. The school is now well equipped for providing instruction in all subjects embraced by the very wide syllabus we have adopted, and students enjoy the greatest advantages for the acquisition of knowledge in most scientific subjects.

As a means of bringing the public at large more in touch with the institution your Council arranged a series of free popular lectures; the first was given on the 2nd August, when the public were afforded an opportunity of witnessing the first electric light in Coromandel, and the Director (Mr. D. V. Allen) gave a short lecture upon the subject of the electric light. The second lecture eventuated on the 23rd August, when Mr. Allen delivered a most instructive address upon electricity and magnetism. On the 15th September, Mr. John Reilly, B.A., C.E., delivered a most interesting lecture upon "The Metric System of Money, Weights, and Measures." The final lecture of the series was delivered on the 7th November, by Mr. John Hayes, Inspecting Engineer of the Mines Department, upon "The Ventilation of Mines." The Council tender their thanks to the gentlemen named for their able and instructive lectures, and consider it would be a wise step to arrange another series during the winter months.

One of the drawbacks which students have laboured under in the past has been the absence of a good reference library, but it is hoped this disability will be removed in the near future. The executive of the late Gold Jubilee Exhibition donated a substantial balance to the school for the object named, and your Council has ordered a number of works of reference, there being at least one dealing with each subject of instruction, which should shortly arrive and fill a much-felt want.

The outlook for the coming year is encouraging, as a number of new students have enrolled; and there is evidence of an increased interest in the institution, which it is hoped will be maintained.

It is with regret that we have to record a vacancy in the office of Vice-president by the death of Captain Hodge, who did much for the welfare of the school during many years; and his memory should be revered as a benefactor of the school. It is likewise with regret that we have to intimate the

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loss of the services of our zealous Secretary, Mr. W. Thomas, who, having removed to another district, has resigned office.

We have pleasure in heartily congratulating our Director, Mr. D. V. Allen, upon having passed the degree of Bachelor of Science at the New Zealand University Examination held in November last. And likewise Mr. Colin Fraser, an old student of this institution, upon having attained the distinction of being the first Coromandel-born Doctor of Science, as the result of a thesis upon the geology of Waihi, written by him.

Report of the Director, Mr. D. V. Allen, B.Sc.

In reviewing the past year's work, it affords me pleasure in stating that the school has again passed through a fairly successful year; and considering the depressed state of local mining, the results may be taken as satisfactory. The school opened on the 3rd February, the attendance being well maintained throughout the year, as may be seen by the following figures:—First term—number of students 20, class-attendance 34; second term—number of students 19, class-attendance 34; third term—number of students 18, class-attendance 32.

The subject of electricity, which was introduced into the syllabus for the first time, attracted several students. Instruction was also given in the following subjects: viz., mathematics, mining, &c., land and mine surveying, theoretical chemistry, practical chemistry, and assaying (senior and junior). The usual practical work in the field was carried out in connection with the surveying class, while in the laboratory considerable experimental work was done.

The annual Government examinations for schools of mines took place in December last, when eleven of our students presented themselves, obtaining four first-class, eight second-class, and three third-class certificates. Two students were successful in passing last year's examination for first-class mine-managers. For the recent examinations, held in January, one student sat for first-class mine-manager, and one for battery-superintendent.

The electric light has been installed in the school buildings, the dynamo having an output of 440 watts when running at 2,300 revolutions per minute. The motive power is provided by a 12 in. Pelton wheel, with a $\frac{3}{8}$ in. nozzle, working under a water-pressure of 85 lb. per square inch. A splendid binocular microscope, replete with all modern accessories, has been obtained, but owing to the fact of our having to send to England for a polarising prism, little headway was made with petrological work. The prospects for the present year are assuring, twenty-one students having already enrolled.

Battery.

During the year thirty-one parcels of ore were crushed and treated at the battery. These represented 25$\frac{3}{4}$ tons of general ore, 16 cwt. of slags, &c., and 713 lb. of picked stone, the total yield of bullion being 550 oz. 12 dwt., valued approximately at £1,650. It is our intention to have both the engine and the single stamper thoroughly overhauled at the first opportunity.

A detailed scheme to work the battery by water-power was submitted to the Minister of Mines for consideration, but intimation was received that the cost of the project was too great to be entertained at the present time.

WAIHI SCHOOL OF MINES.

Mr. Percy Morgan, M.A., Director, reports as follows:—

I have the honour of submitting the following report on the Waihi School of Mines for the twelve months ending the 31st December, 1904:—

During 1904 the attendance at the school, though below the record one of 1903, was very satisfactory, the average number of registered students being fifty-eight. The average attendance in 1903 was sixty-eight, in 1902 it was fifty-one, and in 1901 forty-seven. A feature which was very noticeable both last year and in former years was the fluctuating *personnel* of the students. During each term a number dropped out, and fresh pupils took their places, so that somewhere between eighty and ninety individuals joined the classes at some time or other during the year. A majority of our students, however, attended steadily throughout the three terms, and, as might be expected, nearly all made excellent progress in their studies.

The following table shows the subjects taught, and the attendance for each term in the various classes:—

Table of Attendances for the Year 1904.

Name of Subject.	First Term.	Second Term.	Third Term.	Average.
Junior mining	7	1	1	3
Senior mining	5	6	5	5
Mathematics	26	19	11	19
Junior theoretical surveying	9	6	5	7
Senior theoretical surveying	6	5	5	5
Practical surveying	13	9	9	10
General and mining geology	9	4	3	5
Theoretical chemistry	21	13	13	16
Practical chemistry	20	18	14	17
Wet and dry assaying	21	23	21	22
Metallurgy	12	11	7	10
Drawing	7	7	9	8
Electricity	28	19	13	20
Totals	184	141	116	147
Individual registered students	61	58	54	58

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As usual, a large number of new students joined the school at the beginning of the year. Most of them were employed in the local batteries, and of the others several were mine-carpenters, engine-drivers, &c.; but it is a matter which, personally, I much regret that the list included only two or three men who could fairly be described as practical miners, and had it not been for the students who continued their attendance from last year, the mining side of the school would have been very poorly attended.

As in former years, the instruction given in the morning classes was repeated in the evening, thus enabling those who were working on changing shifts to obtain regular lessons in every subject. This arrangement, while greatly increasing the labour of the teaching staff, was, it is almost needless to say, of great benefit to the students.

Examinations.

It is a matter for gratification that a greater proportion of the students than in past years came forward at the annual examinations. Thirty-two students presented themselves, and between them gave in sixty papers. The results, which are just to hand, are very satisfactory in nearly every respect, and show that twenty-two first-class, eighteen second-class, and eleven third-class certificates were obtained. The marks in metallurgy, mathematics, and explosives were particularly good, every candidate obtaining over 75 per cent.

Government Certificates.

During 1904 three of our students obtained first-class mine-managers' certificates, and four were successful in obtaining battery-superintendents' certificates. Two others obtained partial passes. In all eighteen first-class mine-managers', two first-class coal-mine managers', and nineteen battery-superintendents' certificates have been obtained by regular students of this school during the past seven years, besides some ten or a dozen certificates gained by ex-pupils who were either attending other schools of mines, or had been in the Waihi School too short a time to be counted as regular students. To these figures must be added a number of second-class mine-managers' certificates, winding-engineers' certificates, &c.

Laboratory.

During the year a large amount of public work was done in the school laboratory, including 69 fire assays for gold and silver, 4 determinations of copper, 3 of lead, 1 of zinc, 2 analyses of iron-ore, 1 of scheelite, 1 of coal, 1 of coke, 1 of oil-shale, and 1 of clay. The total number of separate determinations was 174. Practically all of these were performed in duplicate, and in many instances three or four estimations were made. In addition, a number of minerals and rock-specimens were examined and named free of charge.

Mineral Collection.

This has again been largely increased during the year. A collection of 200 specimens has been bought by the Council, and the members of the staff have collected many rock-specimens, most of which have been sliced and microscopically examined. Mr. L. Cramer-Roberts and Captain Newdick (both old students) have sent a fine collection of ores and minerals from Rhodesia; Mr. John P. Fuller has donated a number of interesting specimens from the Redjang Lebong Mine (Sumatra), and Mr. W. J. Hill has given several rare specimens of Bolivian tin, silver, and bismuth ore. We are indebted also to the Grand Junction Gold-mining Company for representative samples of cores from the borehole put down from the 500 ft. level to a further depth of 780 ft. Among other donors may be mentioned Messrs. J. L. Gilmour, E. G. Banks, R. B. Macduff, W. Morrison, W. Newdick, and H. Cramer-Roberts.

Petrological Microscope.

During the year a long-felt want was supplied by the purchase of one of J. Beck and Sons' petrological microscopes, at a cost of £25.

Library.

The small library attached to the school has been much used and appreciated by the students. A few books have been purchased during the year, but, in order to increase its usefulness and bring it up to date, further expenditure is very necessary.

Electrical Plant.

Since the starting of an electrical class, the need of a power-driven dynamo has been very apparent. Aided by a subsidy from the Mines Department the Council has bought a 4-horse-power oil-engine, and a 3-kilowatt dynamo, together with all the wire, lamps, and other material required for lighting the school by electricity. The machinery has been placed in a substantial building, and the students of the electrical class, under the direction of Mr. Wright, have completed a great part of the wiring, &c. The total cost of the installation will somewhat exceed £200, but, besides giving the students an insight into electricity from a practical point of view, it is expected that the cost of lighting will be somewhat lessened.

KARANGAHAKE SCHOOL OF MINES.

The Council has pleasure in presenting this (the sixth annual) report on the work done and results obtained by the school for the year ended the 31st December, 1904.

Attendance.

The attendance for the year has been slightly below that of the former one, an average of twenty students taking forty-five subjects, or a little over two classes per student.

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Examinations.

At the annual class examinations 11 students sat for 26 subjects, from which were obtained 10 first-class, 8 second, and 7 third-class certificates, only one paper failing to obtain a certficate, whilst no failures were recorded. In five subjects students were first in New Zealand—viz., mining, wet and dry assaying (senior), mineralogy, and junior theoretical chemistry.

The average number of marks of all the papers sent in by members of the local school was 64·3 per cent. nearly—a much higher percentage than any other school in the colony.

President's Medal.

Mr. Charles Harsant obtains the President's gold medal, with an average of 74·2 per cent. in five subjects. He was first in the colony in four out of five subjects. The medal was to be gained by the student who obtained the greatest number of marks when his aggregate was multiplied by his average.

Positions held by Present and Past Students.

By attending the school quite a number of students have been enabled to obtain good positions in various parts of the world: the undernoted are a few of them: (1) Mr. E. A. Barry, battery-superintendent, Pilgrim's Rest, South Africa; (2) Mr. G. A. Chappell, chief assayer, Talisman Consolidated, Karangahake; (3) Mr. C. Ansley, member, Bewick, Moreing's staff, Avoca, Victoria; (4) Mr. D. Sheehan, mine-manager, Tairua Broken Hills Gold-mining Company (Limited); (5) Mr. J. C. Maynard, assistanat engineer, irrigation-works, Johannesburg; (6) Mr. Tasman Hogg, battery-superintendent, Gladstone Gold-mining Company (Limited), Waihi; (7) Mr. Bain Hogg, battery-superintendent, Mildura, Western Australia; (8) Mr. Frederick Cordes, sampler and assayer, Western Africa; (9) Mr. John Christie, assistant assayer, Talisman Consolidated, Karangahake.

In the four years that the school has been in operation 106 class certificates in all have been awarded, and in the first three years, eighteen first-class mine and battery-superintendents' certificates have been obtained; two other students have to pass in one subject only. There have been no failures in the mine-managers, and but two in the battery-superintendents' examinations. Added to which, one student has been successful in obtaining His Majesty's Customs Certificate in bullion-assaying, and another has been granted a second-class stationary-engine driver's certificate.

Electrical Classes.

By the kindness of the Thames and Waihi Schools of Mines we were fortunate enough to obtain the services of Mr. Wright as instructor, and the class opened with thirteen students. The balance of electrical appliances ordered from Home should shortly arrive and be the means of adding to the interest already shown.

Auckland School of Mines.

The Council notes with pleasure that a school has been formed in Auckland, which should be of great benefit to students at this end of the Island, and hopes to see the day when entrance to the course in mining engineering may also be obtained through the schools of mines, without having first of all to pass a Matriculation Examination.

Conference of Directors.

Several suggestions have been forwarded to the Government by the respective directors of schools in this district, amongst them being a recommendation to reduce the number of marks to 70 per cent. in each, or an average of 75 per cent. in all subjects for a scholarship examination; and, secondly, that each school should teach from the same text-books, so as to arrive at a uniform syllabus.

The Government adopted the local school's standard in marking for class certificates—viz., 70 per cent. or over for first-class, 55 per cent. or over for second-class, and 40 per cent. or over for third-class.

Installation of Gas.

During the year gas has been installed throughout the school, making a great improvement.

In conclusion, the Council feels that too much cannot be said in favour of the work of the Director, Mr. Macduff, and the members feel that much of the success that has been obtained is due to the individual interest he takes in each student.

NELSON SCHOOL OF MINES.

The instructor, Mr. W. F. Worley, submits the following report:—

Mineralogy and Blowpipe Analysis Class.

This class, with the exception of a break of two weeks, was in session from the 11th February till the 15th December. The work undertaken was similar to that of previous years, but rather more attention was devoted to the study of mineralogy. There were fifteen boys in this class, and each boy was taught to identify by means of the blowpipe—with sometimes a confirmatory chemical test—ores of antimony, tin, lead, bismuth, zinc, copper, chrome, iron, nickel, cobalt, and manganese. Several tests were also made for arsenic, sulphur, sodium, potassium, strontium, barium, and calcium. Panning off auriferous black sand for the recovery of the gold was also practised.

In mineralogy the class was taught to determine the hardness and the specific gravity of minerals; and also to observe the colour, streak, lustre, and fracture. Ores of iron, lead, copper, and chrome were then systematically studied, attention being given to the base element in the ore as well as to the important metal.

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Twice during the year this class was taken out for field-work. Once to the Dun Mountain, where specimens of iron, copper, and chrome were collected for subsequent treatment, and once to the Lea Valley for the study of stratified deposits and the work done by rivers.

Chemistry

One student—a lady preparing for an examination in dispensing—took a preliminary course of twelve lessons in elementary chemistry. The instruction given was both theoretical and practical, and, as far as possible, intimately interwoven. The subjects taken up were few in number, but a good foundation was laid upon which future instruction will be built. This student intends to continue her studies in this subject for about two years, when she will present herself for examination.

Assaying.

In all twenty-seven assays were made for the public. These comprised twenty-two assays for gold; three samples of coal; one sample of copper-ore which was assayed for copper and gold; and one sample of argentiferous galena which was assayed for gold, silver, and lead. With the exception of the coals, all the foregoing were of poor quality, and not likely to be of any commercial value. Several of the assays for gold were made on Parapara ironstone, which only yielded traces of gold.

A white crystalline substance sent from the Owen Junction by Mr. Win proved upon analysis to be native epsomite. Mr. Win reported that those who found this substance were made ill by drinking tea made from water near where it was got. No wonder!

For many years past I have had to work in a wretchedly small laboratory, and the amount of work I could undertake has been considerably curtailed thereby. Now, at my own expense, its capacity has been more than doubled, and if my health will permit, I hope to increase the amount of work hitherto done here.

REEFTON SCHOOL OF MINES.

The Director, Mr. J. Henderson, reports as follows:—

I have the honour to submit the following report for the year 1904:—

Classes were started in the middle of March and maintained regularly throughout the year. The attendance has been up to the average, although (considering the importance of the district) rather disappointing. During the first term the number of students on the roll was 37, with an average attendance of 24·6. For the second term the figures were respectively 47 and 26·3; for the third term 43 and 21. Besides the usual classes in chemistry, metallurgy, assaying, mining, drawing, and surveying, I attempted to start one in geology, but the encouragement was so small that the class was abandoned.

At the annual December examinations for schools of mines, students obtained six firsts, one second, and four thirds. I understand that six students intend to sit for the examination for mine-managers', and three for battery-superintendents', certificates.

During the year seventy-six assays for gold and silver were made for the public; eleven analyses (more or less complete) of minerals and alloys; six complete analyses of mine-air; and also gold was extracted from one large and seven small parcels of ore, &c.

Fortnightly meetings of the Mining Students' Association were held throughout the winter, and several interesting original papers read.

Some seventeen pounds' worth of books on mining, metallurgical, and science subjects were purchased and added to the library of this institution. Besides this, standard periodicals on mining, &c., were taken.

In conclusion, I have to thank the committee for their support, and more especially the secretary.

WESTPORT SCHOOL OF MINES.

The Director, Mr. Sidney Fry, reports as under:—

I have the honour to furnish herein the report on the Westport School of Mines for the past year.

The same classes have been held as in the previous year—viz., chemistry (theoretical and practical), assaying, mineralogy, and mine and land surveying, though I regret to say that the average attendance is slightly lower that than for the previous year. It is as follows: Theoretical and practical chemistry, 8·7; mineralogy, 8·4; surveying, 4·8; and assaying, 7·5.

In addition to carrying on these classes the Director has visited Denniston once every week and taught the following subjects, with average attendance as follows: Mining, 3·5; mathematics, 1; steam and steam-engines, 2·5. The steam class has now been discontinued for lack of attendance, and a class in mechanical drawing held instead.

At the end of the year we held the examinations in school-of-mines subjects as is done by the other schools, the results being fairly satisfactory, considering that the majority of our students are boys of from twelve to fifteen years of age. The President's gold medal, presented by Mr. James Bradley, President of the School Council, for the student gaining the highest aggregate marks was won by Master James Milligan, of Denniston, with the total of 211 marks for three subjects, while the silver medal for juniors was taken by Master Walter Hallahan, of Westport.

One of our students, Mr. Will Gowans sat at examination at Reefton last year for a first-class colliery-manager's certificate, and was successful in passing. Mr. Alex. Marshall, of Denniston, another student, has also passed at the examinations held last January.

Some considerable number of assays and analyses have been done during the year, comprising twenty-one of coal, thirty-five for gold, and eighteen for metals other than gold, as well as a number of

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experimental tests by chemical and other treatment of ores. A goodly number of minerals were also identified, amongst them the most interesting being,—

(1.) A black mineral brought from Arahura Valley by Mr. A. H. Richards, which proved to be magnetite. This gave assays of gold from 5 dwt. up to 1 oz. 6 dwt. per ton; a fair prospect could be obtained by powdering and panning off in a dish.

(2.) A black vitreous mineral from Karamea. Senders of this were under the impression that it was pitch-blende, but tests confirmed our supposition—viz., that it was obsidian, or volcanic glass.

(3.) A mineral occurring in quartz leaders in the Paparoa Range, near Greymouth. This mineral, which somewhat resembles graphite, and has often been mistaken for it, was proved to be the sulphide of molybdenum (molybdenite). An analysis of a specimen in quartz gave Mo. 9·2 per cent. = Mo Sa. 15·3 per cent.

(4.) Sample of hydrous iron-ore from the Hidden Treasure Mine, Nelson District. The mean of two assays gave—gold, 2 dwt. 23 gr.; silver, 8 dwt. 2 gr. per ton. This ore seems to be auriferous throughout the district, although generally of a very low grade. The mean of eight assays of the ore from the vicinity of Messrs. Washburn's paint-works at Parapara was gold, 1 dwt. 3 gr.; silver, 1 dwt. 1 gr. per ton: while another set of ten assays from the same locality averaged gold, 6 dwt. 13 gr.; silver, 3 dwt. per ton. Our experience has shown that, as a rule, the more siliceous portions of the ore are the highest in gold-contents, but out of over thirty assays only two were devoid of gold. Some of the samples of this ore also contained a little platinum.

(5.) Sample of concentrates from Jameson's and party's cement claim, Bradshaw's Terrace. On analysis for the rare earths, this gave—thoria, 0·2 per cent.; ceria, oxides of lanthanum, &c., 0·42 per cent. These concentrates have a yellowish-brown tint, and under the magnifying-glass show a number of semi-transparent yellowish and clove-brown particles, leading us to think that they might contain monazite. This discovery is, of course, unimportant economically, but may be of interest from the fact that it is the first discovery of the compounds of cerium and thorium in New Zealand.

In order to raise money to erect a building for the School of Mines, our council decided to hold a Mining and Industrial Exhibition during the Christmas week, and a committee was organized composed of the Mayor, Mr. F. F. Munro, and a number of citizens, to all of whom we beg to tender our heartiest thanks. The exhibition was held in due course, the Mining Court being a very interesting feature, judging by the attention paid to it by the public. In this portion of the exhibition we were greatly assisted by a loan collection of mining models from the Otago School of Mines, and loan collections of minerals from the Mines Department and the Waihi School of Mines, to which institutions great thanks are due. The Exhibition, besides being a source of amusement and instruction during Christmas week, was financially successful, the profits amounting to £112.

It is our intention to form a library of works of reference, and the Council have purchased a few volumes to start with; we have also to thank Mr. Neve for the gift of two works on assaying and electricity, and we hope others will see fit to follow his example; we have also to acknowledge with thanks the various publications sent to us by the Mines Department, and complete yearly issues of the *Engineering and Mining Journal*, presented by Mr. A. D. Bayfeild.

During the year we have augmented our collection of minerals by the purchase of a set of the rare minerals, by a number of Tasmanian ores, presented by Mr. John Barrowman, of Nelson; also by a set of forty-three minerals and rocks kindly given by the Waihi School of Mines.

OTAGO UNIVERSITY SCHOOL OF MINES.

The Director, Professor James Park, F.G.S., submits the following report:—

The mining school for the year ending the 31st March, 1905, showed the satisfactory attendance of forty-seven students, comprising thirty-four registered students for the full course and thirteen for one subject only, namely, twelve in geology and one in surveying. The persistent rumours in the past year or two that the mining school would be closed or removed from Dunedin created a feeling of uncertainty as to the future which has already caused a marked decrease in the number of new students for the session of 1905. It will, doubtless, be some time before we again reach the satisfactory attendance of the past four years.

Diplomas granted in 1904.

Diplomas were issued to students on production of the necessary certificates of practical work, as follows: D. M. Tomlinson, diploma in metallurgy; J. Bailie Macdonald, diploma in mining; A. Reed Graham, diploma in metallurgy; A. R. Andrew, diploma in mining; G. W. Eaton Turner, diploma in metallurgy; J. Allan Thomson, diploma in mining; W. Brand Inglis, diploma in mining; John McKinlay, diploma in metallurgy.

Annual Examinations.

Forty-two students presented themselves for examination in thirty-four subjects, and of these only three failed, namely, one in mathematics, one in physics, and one in surveying.

New Zealand University Examinations.

Exhibition Scholarship, 1851.—Two mining students competed for the 1904 scholarship—namely, Arthur R. Andrew, B.Sc., and James Allan Thomson, B.Sc., The geological theses sent in by these students were reported by the English examiner to be equal and excellent. The Senate of the University of New Zealand at its annual meeting in Wellington, in February, 1904, awarded the scholarship to Mr. Andrew, who in the same year had won first-class honours in physics and second-class honours in geology. Mr. Thomson had gained first-class honours in geology, and for this and his excellent thesis

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the Senate recommended the 1851 Exhibition Commissioners to award him a second Exhibition Scholarship. The Commissioners acceded to the request, and awarded Mr. Thomson a scholarship, which he resigned in favour of the Rhodes Scholarship.

The Rhodes Scholarship for 1904.—Mr. J. Allan Thomson, was elected the first Rhodes Scholar for New Zealand by the Selection Committee sitting in Government House, Wellington, in May, 1904. He was a distinguished scholar and prominent athlete. His academic career represented a standard of excellence rarely equalled by a graduate of the University of New Zealand. He has earned our most hearty congratulations.

Honours in Natural Science.—Charles Norton Boult, B.Sc., first-class honours in geology.

Senior Scholarship.—Robert A. Farquharson, senior scholarship in geology.

Mining Engineering.—Passed first examination in mining engineering, P. H. McDouall; completed first examination in mining engineering, A. Gordon MacDonald, Hugh R. MacDonald, William McCullough; passed second examination in mining engineering, William Gibson; and E. T. H. Webb; passed second examination in metallurgical engineering, W. A. Given, M.A.

Grey Scholarship.—Robert A. Farquharson. This scholarship has now been won by a mining student for three years in succession.

Robinson Medals.—For mining and surveying, J. E. Menzies; for quantitative chemical analysis, J. T. Mosley.

Ulrich Medal.—For petrography and mineralogy, R. A. Farquharson.

Laboratory.

During the year eighty-four samples of ore were assayed for the public at schedule rates, and in the same period the Director furnished reports on thirty-seven samples of rocks and minerals free of charge.

Geodesic Station on Tanna Hill.

Last October and November the Director completed the observations needed to connect Tanna Hill with the Government Meridional Geodesic Station at Observation Point, Port Chalmers. The latitude and longitude of the station on Tanna Hill have been computed, and an azimuthal bearing in terms of Observation Point meridian thrown on to an iron standard in the quadrangle in the University grounds.

A true bearing has also been thrown on to the illuminated clock in the Town Hall tower which provides the necessary referring light for night observations without cost or charge to the Council.

The surveying students will now be able to conduct their surveys on true meridian instead of on an artificial or magnetic meridian as in former years, check the error in azimuth of their traverse meridian, and take rounds of angles to the sun and circumpolar stars for the determination of meridian, latitude, and time.

Chain Standard.

Of late years field-measurements have been made by surveyors and engineers with 500-link steel bands, but up till now there has been no standard provided in Otago for checking the accuracy of the bands. It is a pleasure to report that a 5-chain standard is now being laid down by the General Survey Department of New Zealand under the direction of Mr. D. Barron, Chief Surveyor, in the University grounds near the mining school for the use of the professional surveyors, engineers, and mining students.

Associates of Mining School.

The diploma of Associate was first issued in the year 1887. The diplomas granted in the several divisions of the school since that date are as under:—

Division.	Issued from 1887 to 1903.	Issued in 1904.	Total.
Mining	70	4	74
Metallurgy	32	4	36
Geology	12	..	12
Totals	114	8	122

In 1902 the standard of instruction for the Associate diplomas was raised to that of the B.Sc. requirements of the New Zealand University in mining engineering. Prior to that date mining graduates took the ordinary B.Sc. Since that date some take the B.Sc. in mining or metallurgical engineering, but some still prefer the ordinary B.Sc., as the requirements in respect to keeping terms are easier than for the former.

The mining graduates who have taken the ordinary and engineering B.Sc. are as follows: Ordinary B.Sc. prior to 1902, 3; ordinary B.Sc. since 1902, 5; engineering B.Sc. since 1902, 3: total, 11.

Occupations of Old Students.

Among the appointments secured by old students during 1904 are the following: (1) E. Graham, Acting Director, Charters Towers School of Mines; (2) W. A. McLeod, B.Sc., general manager mining company, Charters Towers; (3) G. Ulrich, Assistant Surveyor, Waihi Company; (4) W. Baker, B.Sc., lecturer, West Australian School of Mines; (5) T. H. B. Wayne, metallurgist, General Mining and Finance Corporation, Johannesburg; (6) H. E. Allen, assistant metallurgist, Linpaards Vlei, Transvaal; (7) P. Fitzgerald, Manager, Vivien Mine, Western Australia; (8) W. M. Fulton, general manager, mining company, Johannesburg; (9) E. A. de Latour, mine-manager, Magnet Mining Com-

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pany, Waratah, Tasmania; (10) G. H. Royse, appointed to staff of Ferrerira Deep Mine, Johannesburg; (11) G. Aubrey Gow, Manager, Progress Cyanide-works, Reefton. Besides these, six have received appointments as cyaniders, assayers, and assistant surveyors.

The students who have secured lucrative positions in connection with mining at salaries ranging from £200 to £1,000 a year in the four years 1901 to 1904 inclusive are as under: 1901, 8; 1902, 7; 1903, 8; 1904, 11: total, 34.

Mining-school Buildings.

I regret to report that the class-rooms and laboratories, with a single exception, are in a ruinous and dilapidated condition, thereby adding considerably to the discomfort which must always attend lecturing and laboratory work in a corrugated-iron building—at best a mere shell—in a rigorous climate like this.

A new, up-to-date, and commodious building has now become a matter of common necessity. The attendance and results last year formed a record in the history of the school. No faculty connected with the University of New Zealand has provided through its diplomas the same lucrative employment for its graduates, and none is so badly housed—none could be worse.

Conclusion.

My acknowledgments are due to Dr. Marshall, Mr. Waters, Mr. Armstrong, lecturers, and Mr. Algernon Spencer, demonstrator in surveying, for the zeal they displayed in carrying out their duties during 1904.

EXPENDITURE ON SCHOOLS OF MINES.

The following table shows the expenditure by the Government on schools of mines since their inauguration, exclusive of subsidies paid to the University of Otago towards the School of Mines in connection with that institution:—

Financial Years.	Subsidies towards the Erection of Schools of Mines, and Maintenance.	Chemicals and Apparatus, also Mineralogical Specimens supplied to Schools of Mines.	Scholarships.	Salaries of Teachers, and Travelling-expenses, &c.	Total Sum paid by the Department towards the Schools of Mines.
	£ s. d.	£ s. d.	£	£ s. d.	£ s. d.
1885–86 ...	...	36 19 9	...	1,223 9 10	1,260 9 7
1886–87 ...	257 16 6	409 1 4	...	2,716 9 3	3,383 7 1
1887–88 ...	253 15 9	253 14 1	...	1,714 9 6	2,221 19 4
1888–89 ...	42 10 0	6 12 9	...	1,139 4 1	1,188 6 10
1889–90 ...	142 2 0	181 14 10	...	716 3 10	1,040 0 8
1890–91 ...	217 6 6	54 8 0	...	620 9 9	892 4 3
1891–92 ...	181 14 0	...	...	689 5 9	870 19 9
1892–93 ...	312 3 4	...	...	670 1 0	982 4 4
1893–94 ...	197 0 5	...	...	858 19 4	1,055 19 9
1894–95 ...	390 0 0	45 10 10	...	773 17 8	1,209 8 6
1895–96 ...	820 0 0	...	50	849 3 0	1,719 3 0
1896–97 ...	352 14 11	58 18 6	100	834 12 8	1,346 6 1
1897–98 ...	1,089 18 6	29 19 9	100	780 19 0	2,000 17 3
1898–99 ...	740 15 2	32 19 7	50	729 10 11	1,553 5 8
1899–1900 ...	990 3 4	24 3 8	50	52 16 3	1,117 3 3
1900–1901 ...	866 10 11	56 3 4	98	77 7 10	1,098 2 1
1901–1902 ...	1,155 12 3	63 5 1	49	69 16 4	1,337 13 8
1902–1903 ..	1,379 15 6	134 18 8	158	111 0 0	1,783 14 2
1903–1904 ...	1,575 15 3	88 18 8	92	109 15 10	1,866 9 9
1904–1905 ...	1,401 2 11	17 3 0	100	362 19 6	1,881 5 5
Totals ...	12,366 17 3	1,494 11 10	847	15,100 11 4	29,809 0 5

The above statement shows the amount expended on the different schools of mines throughout the colony; but, in addition to this, the sum of £11,053 6s. 2d. has to be added, as that has been paid to the school of mines attached to the University of Otago, £500 being paid last year towards maintaining the school, which makes the total expenditure up to the 31st March last to be £40,862 6s. 7d. This expenditure has extended over a period of twenty years.

The appendices which follow contain (*a*) the reports of Inspectors of Mines, Wardens, Managers of Water-races, Engineer for Water-conservation, and Government Geologist; (*b*) the questions used at the last examinations of candidates for certificates enabling them to act as managers of mines and superintendents of batteries; (*c*) a list of persons to whom certificates as mine-managers, battery-superintendents, and dredgemasters have been issued; and (*d*) the usual statistical returns.

I have, &c.,

John Hayes,

Inspecting Engineer.

The Hon. the Minister of Mines, Wellington.

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APPENDICES.

REPORTS OF INSPECTORS OF MINES.

Mr. James Coutts, Inspector of Mines, Thames, to the Under-Secretary for Mines, Wellington.

Sir,— Office of Inspector of Mines, Thames, 18th February, 1905.

I have the honour to furnish herewith the following report on the gold-mining industry in the Hauraki District for the year ended the 31st December, 1904.

There is a decided improvement in some of the mines on the Thames. In an especial manner the new discovery at the Waiotahi Mine has given encouragement to shareholders in the other mines in the immediate neighbourhood, and will be the means of causing more development-work to be done in the future than has been done for some time past.

The boring operations recently carried out at Thames, are, I am sorry to say, finished. They have not resulted in any fresh discoveries being made.

In the Coromandel District mining is at a very low ebb, the prospects being anything but encouraging—the Waitaia Mine at Kuaotuna excepted—but, still, as the rich gold is mostly found in patches, a new discovery may be made in the district at any time.

In the Ohinemuri district the Waihi Company's mine is holding its reputation, there being a slight increase in the output of bullion during 1904 as compared with the previous year.

Ohinemuri District.

Waihi Gold-mining Company.—The operations in this mine are considerable, as will be seen by the various works herein enumerated and the large number of men that are employed by the company in connection with the mine and the mills for the winning and treatment of the ore.

No. 7 level.—Royal Lode, north section: Driving was started in May last on the course of this cross-lode in order to lower the mine-water, and, up to the present, 312 ft. has been driven north and 215 ft. south, making a total of 527 ft. Driving was intermittent, owing to large quantities of water met with. At 212 ft. south of No. 5 shaft, the Royal Lode was intersected; the north face is within 38 ft. of No. 4 shaft. At 30 ft. north of No. 5 shaft, Lloyd Pass was connected with No. 6 level, and is now used as a travelling-way.

No. 6 level.—Crosscuts: No. 2 shaft south-east crosscut was extended 537 ft. to No. 5 shaft, making a total length of 1,010 ft. No. 1 shaft north-west crosscut was advanced 150 ft., making a total of 289 ft. from No. 1 shaft; at 276 ft., the No. 2 reef was intersected and is from 2 ft. to 3 ft. in width; several small sulphide leaders were passed through in this crosscut. No. 1 shaft south-east crosscut was driven 21 ft. from shaft where Albert Lode was intersected 4 ft. wide. Paul: south-east crosscut was driven a total length of 121 ft. from Empire Lode; at 31 ft. quartz 3 ft. wide was met; at 87 ft., Princess Lode, 2 ft. 6 in. was intersected. Martha Lode, north section: Bullson No. 2 Pass sunk 80 ft.; Bullson Pass sunk 80 ft.; Carterson Pass sunk 98 ft.—at 80 ft. down, a lode 22 ft. wide; Wheelson No. 2 Pass sunk 80 ft.; Wheelson Pass sunk 99 ft.; Britson Pass sunk 55 ft.; Fosterson Pass sunk 80 ft.; Longson Pass sunk 92 ft.; Tremson Pass sunk 84 ft.; Camson Pass sunk 7 ft.; Leo Pass sunk 100 ft.; Venus Pass sunk 64 ft.; Plummer Pass sunk 103 ft.; Pile Pass sunk 106 ft.; Manning Pass sunk 48 ft.; Juno Pass sunk 80 ft.; Jove Pass sunk 81 ft. Martha Lode, south section: Lumb Pass sunk 87 ft. Regina Lode: Jones Pass sunk 90 ft.; Ready Pass sunk 103 ft.; Price Pass sunk 90 ft.; Nut Pass sunk 80 ft. No. 2 Reef: west of No. 6 shaft crosscut, the level on course of lode has been extended 255 ft., making a total length of 520 ft. opened up on lode; the average width for the length developed during the year is 3 ft. Winzes: Rickard Pass sunk 118 ft.; White Pass sunk 109 ft.; Black Pass sunk 26 ft. Albert Lode: North of Harris's north-west crosscut the level has been driven on course of lode 103 ft., making a total of 206 ft. north of above crosscut; the lode proved to be 4 ft. wide; the north end of lode junctions with Regina Lode. Empire Lode: Peter Pass sunk 80 ft.; Hicks Pass sunk 80 ft.; Muir Pass sunk 80 ft.; Paul Pass sunk 101 ft.; Connor Pass sunk 15 ft.; Harris Pass sunk 89 ft.; Rolker Pass sunk 80 ft. Royal Lode: After driving south on north section of this lode, attention was directed to intersect this lode at 635 ft. south from No. 4 shaft; now 420 ft. has been driven east and 370 ft. west on its course, making a total of 790 ft. opened up; the average width is 15 ft. Winzes: Nite Pass sunk 118 ft.; Snail Pass sunk 80 ft.; Moran Pass sunk 78 ft.; Slug Pass sunk 86 ft. Princess Lode: A total length of 281 ft. has been opened up on course of this lode west of Paul's south-east crosscut; the average width is 3 ft. 3 in. J Reef: A total of 120 ft. has been opened up on course of lode west of Empire junction; average width 1 ft. 6 in.

No. 5 level.—Crosscuts: No. 1 shaft, north-west crosscut, was advanced 77 ft., making a total of 207 ft. from No. 1 shaft; a connection was made to No. 2 filling-shaft. No. 1 shaft, south-east cross-cut, was driven 30 ft. from No. 1 shaft where Albert Lode, 3 ft. wide, was met. A crosscut was also driven from north section, Royal Lode, to Royal filling-shaft, a distance of 158 ft. Martha Lode, north section, east of No. 1 shaft, north-west crosscut: The level was extended 44 ft., making a total of 837 ft. east of above crosscut. No. 2 Reef, west of No. 6 shaft, north-west crosscut: The level has been advanced 189 ft. on course of lode making a total of 454 ft. from No. 6 shaft; the lode averages 3 ft. in width. Winzes: White and Black Passes have been sunk to No. 6 level; Red Pass was risen to No. 4 level. Regina Lode, east of No. 1 shaft, north-west crosscut: The level has been driven on course of lode 148 ft., making a total of 198 ft. east of the above crosscut. Albert Lode, north of Empire junction, has been driven on from 447 ft. to 679 ft.; average width, 6 ft. Foy and Swan Passes were sunk to No. 6 level. K Reef was driven on 34 ft. west of No. 2 shaft, south-east crosscut. Princess Lode, west of No. 2 shaft, south-east crosscut has been driven on from 77 ft. to 230 ft. Royal Lode, west of No. 5 shaft, south-east crosscut: The lode has been driven on from

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441 ft. to 606 ft.; east of north section junction the lode has been driven on from 129 ft. to 370 ft. Winzes: Snake, Slug, Worm, Nite, Snail, and Frog Passes have been sunk to No. 6 level.

No. 4 level.—Crosscuts: No. 1 shaft north-west crosscut was advanced from 168 ft. to 263 ft. from No. 1 shaft and a connection made to No. 2 filling-shaft; Skinners south-east crosscut was extended from 462 ft. to 676 ft. from Welcome Lode. Martha Lode, north section: A level was driven on this footwall of lode from 153 ft. to 461 ft. east of No. 1 shaft, north-west crosscut.

No. 3 level.—Crosscuts: A north crosscut was driven from Royal Lode to Royal filling-shaft a distance of 225 ft. Martha Lode, north section: The level has been advanced from 209 ft. to 267 ft. east of No. 2 shaft, north-west crosscut, on the footwall of lode; east of No. 1 shaft, north-west crosscut, the level has been advanced partly in the country and partly in the sulphide ore for 279 ft.; Bullson Pass sunk to No. 4 level; Bullson Pass was also risen to No. 1 level. Empire Lode west of Albert junction: 151 ft. was driven on course of lode; Hicks, Perry, and Jo Passes were sunk to No. 4 level. I Lode, east of No. 2 shaft, south-east crosscut: A length of 100 ft. was opened up; Dunstan and Martin Passes have been sunk to No. 4 level. L Lode, north of No. 2 shaft, south-east crosscut: A length of 185 ft. was opened up; Benny's Pass was sunk to No. 4 level. Victoria Lode, north section: The east face has been connected with the Surprise Level.

No. 2 level.—Crosscuts: A crosscut was run from Martha Lode to No. 2 filling-shaft, a length of 39 ft. Empire Lode: The west face of level was advanced 95 ft.; Jo Pass was connected to No. 3 level. Albert Lode: The north face has been advanced from 130 ft. to 271 ft. north of J Lode junction; Menzie Pass has been connected to No. 3 level. Victoria Lode, north section: The east face has advanced 75 ft. from Truscott Pass.

No. 1 level.—Crosscuts: South-east crosscut from Martha Lode near Bell Pass was driven a total distance of 161 ft. during the year; at 17 ft., quartz 18 in. wide was intersected; at 123 ft. a reef 12 in. wide was driven through; at 143 ft. quartz 2 ft. wide, at 160 ft. quartz 3 ft. 6 in. wide, and at 177 ft. quartz 12 in. wide. North-west crosscut from Welcome Lode near Scott's Pass has been driven a total of 51 ft. Martha Lode, west of Merrie's Pass, has been driven on from 582 ft. to 660 ft. Bell Pass was risen to upper smithy level. Welcome Lode: Corne's No. 2 and Twomey's Passes have been risen to surface. Empire Lode west of Muir's Pass: The lode was driven on 155 ft.; Jo Pass was connected to No. 2 level.

Adit level.—Martha Lode: Footwall section of lode was driven on 33 ft. east and 26 ft. west of No. 2 shaft, north-west crosscut.

Upper smithy level.—Martha Lode, south branch, has been driven on east of western side of Martha Hill from 186 ft. to 502 ft.; Gordon Pass was sunk 65 ft.; Ward Pass was risen to No. 1 drive; Bell Pass has been risen to surface; Fugill Pass has been risen 55 ft.; right-hand branch of Welcome Lode has been driven on 240 ft.

Surface cuts.—The following filling-passes have been sunk:—No. 2 filling-pass, situated opposite No. 1 shaft in footwall of Martha Lode, has been sunk vertically a total of 473 ft., or 23 ft. below No. 5 level; this is now in use. Kerz Pass, situated in Albert Lode, has been sunk 243 ft. and is now in use. Royal filling-pass, situated 120 ft. south of No. 5 shaft, has been sunk 434 ft.; this is now in use.

Shafts.—No. 1 shaft: Sinking was resumed on the 15th October, and, up to the end of the year, a further depth of 81 ft. was sunk, making a total depth of 653½ ft. from surface, or 98 ft. below No. 6 level; at 69 ft. below No. 6 level, quartz came in from south side of shaft and exists at bottom; the new winding-engine (two 18 in. by 36 in. cylinders, geared to one 9-ft.-diameter drum) has been in use since June. A new brace of 9 ft. above old one has been erected. No. 2 shaft: No sinking has been done; the bottom is now free of water (732 ft. from surface); steel helical spur-and-pinion wheels have been placed on the winding-engine. No. 4 shaft: Sinking was resumed on the 5th November, and, up to the end of the year, a further depth of 70 ft. was sunk, making a total depth from surface of 631½ ft., or 87 ft. below No. 6 level; at 80 ft. below No. 6 level, the Empire Lode came in, dipping 1 in 2 north, and is 4 ft. wide where quartz is exposed; at 32 ft. below No. 6 level the shaft enters the solid reef-bearing andesite rock; steel helical and pinion wheels have been placed on the winding-engine. No. 6 shaft: Sinking was resumed on the 19th July and stopped on the 15th October, and, during this period, 110 ft. was sunk, making a total depth of 555½ ft. from surface, or 10 ft. below No. 6 level; this shaft is only used for sending down filling-material for the Martha east-end stopes. No. 5 shaft: No sinking has been done; "C" pump was started in April; a travelling-way from Nos. 6 and 7 levels has been made through Lloyd Pass; a large volume of water was struck on the 14th September, and both "B" and "C" pumps were run together until the 22nd October, when "C" pump was sufficient.

Mine-development and deadwork.—Crosscuts through country, 2,819 ft.; on course of lode, 6,249 ft.; crosscuts in lode, 1,099 ft.; winzes sunk, 10,083 ft.; shafts sunk, 261 ft.: total number of feet, 20,511 ft., or 3·9 miles.

Report of milling operations during 1904.—Product: A total of 259,978 tons of quartz (dry weight of 2,240 lb. per ton) has been crushed during the year, which exceeds by 28,655 tons the total of 231,323 tons crushed during the year 1903. The whole of this has been wet-crushed. The product was 928,050·2 oz. bullion, exclusive of concentrates and slag tailings, which were shipped. Five shipments of slag tailings, amounting to practically 39½ tons in all, have been made during the year: the total assay value of these five shipments amounted to £1,542 18s. 11d. A total of 1,992·19 tons of concentrates was treated at the Victoria Mill and produced 149,915 oz., of a value of £53,835 16s. 8d. 778,135·2 oz. of bullion (excluding concentrates and slag-tailings shipped), £599,654 10s. 4d.; 149,915 oz. of bullion (making a total of 928,050·2 oz.) from concentrates plant, Victoria Mill, £53,835 16s. 8d.; assay value of 367·60 tons on concentrates shipped, £18,068 2s. 5d.; assay value of 39·46 tons slag tailings shipped, £1,542 8s. 11d.: total, £673,101 8s. 4d. A total of 118,778 tons was passed over amalgamated copper plates and vanners before being cyanided, a further 141,200 tons was cyanided direct, making a total of 259,978 tons.

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Reduction-works.—The tonnage crushed at the three mills were respectively as follows: Waihi Mill (90 stamps), 70,806 tons; Victoria Mill (200 stamps), 162,924 tons; Union Mill (40 stamps), 26,248 tons: total, 330 stamps, 259,978 tons. The total average number of stamps running during the year, exclusive of Sundays and the period at Christmas during which the mills were stopped, was 320,285, out of a total of 330 stamps, an increase of 2,815 stamps compared with the average total running during 1903. The total average duty per stamp per diem was 2·657 tons, an increase of 0·251 tons compared with the previous year.

Waihi Mill (90 stamps).—The total rainfall for the year amounted to 83·05 in., which is practically the same as during the preceding year. Substantial coal-hoppers have been erected alongside the boiler-house and connected with the main tram-line by a new branch line. It was decided to add three tube-mills to the crushing plant at this mill. The necessary excavation-work has been completed, concrete foundations put in, and the mills have been erected in position, the necessary building is in course of erection, and the pulleys have been ordered. An additional Babcock and Wilcox boiler with automatic chain-grate stoker attached has been added to the steam-power plant. Four wrought-iron vats 25 ft. diameter by 6 ft. in depth have been erected to provide additional sands-treatment vats which will be required when the tube-mills are at work. Two additional slime-settling vats, 32 ft. in diameter by 14 ft. in depth, were required. One of these has been erected and brought into use; the necessary excavation for the second one has been made, and the vat should be received shortly. Two rectangular treatment-vats have been added to the treatment plant.

Victoria Mill (200 stamps).—The work in connection with the foundry which was in hand at the end of 1903 was completed, and the foundry was brought into use early in the year. The fourth elevator-wheel has been brought into use for lifting the pulp from the mill to the treatment plant. Two additional sand-treatment vats, 33 ft. in diameter by 7 ft. in depth, have been added. A breaking-down saw and building have been added to the sawmill plant.

Union Mill (40 stamps).—A Leffel wheel has been obtained for this mill.

An average of 1,236 men were employed by the company. The large sum of £297,544 4s. was paid in dividends during the year; making the total of £1,552,687 11s. 6d. since commencing work.

Waihi Grand Junction Mine.—The company has during the year directed its full energy in developing the Grand Junction, or eastern portion of their property. The Junction shaft is now sunk to a depth of 775½ ft. and timbered throughout; the third plunger-set installed, and the rising column of pipes put into position and connected with the cisterns above, and may now be looked upon as a permanent pumping-shaft. The No. 2 level east of the crosscut has been extended on the lode for a distance of 644½ ft. close up to the Waihi Extended Company's boundary; that company then made a connection with the end of the drive, which as a natural consequence gave excellent ventilation to the mutual advantage of both companies. From the bottom of this level (along the distance the lode has been driven on) nine winzes have been sunk whose depth on the aggregate amount to 508 ft., and a winze is being sunk to the west of the crosscut, and is now down 10 ft. This is being done with a view to opening up more ore in this section. No. 3 level: A crosscut drive has been driven at this level for a distance of 449½ ft., resulting in the intersection of what is termed the Martha and No. 2 Lode, the widths of which are 28 ft. and 7 ft. respectively. A contract has been let for rising and driving on the lode to connect with the bottom of the winzes sunk from No. 2 level. The quartz (so far as the lode has been driven and sunk upon) is said to be of a payable character. There has been added during the year to the plant an electrical-lighting plant for the effectual lighting of the several departments, working the stone-breaker, driving electrical drills, small pumps, and hoists. The forty-stamp mill purchased from the Kauri Freehold Estates Company has been delivered on the property, and rapid progress is being made with the earthwork-excavations on the battery-site. In addition to the above work, several buildings have been erected, including shed for dynamo plant, extension of carpenters' and blacksmiths' shops, &c. An average of forty-six men were employed on the property.

Waihi Extended Mine.—The work carried out in this company's mine during the past twelve months was principally at the 500 ft. level; driving in a southerly direction was in progress at the end of the previous year. This drive was driven to the boundary, but as no ore-bodies were met with it was decided to drive in a north-north-westerly direction along the boundary, where it was anticipated that the reef being driven upon in the Grand Junction Mine would be intersected; and when a distance of 240 ft. had been driven, a reef was cut which proved to be the one worked upon in the Grand Junction Mine. A connection was made with the drives of both mines, which has given good ventilation. This reef, when cut through, was 18 ft. wide, the last 6 ft. or footwall portion being very heavily mineralised. Samples of ore taken from different parts of the reef when assayed gave very encouraging results. A drive on the footwall portion of the reef was driven for a distance of 120 ft., the quartz gradually going underfoot, and only the formation of the reef continuing ahead. This leads the mine-manager to believe that the drive is virtually on the cap of the reef. A winze was also sunk upon the reef for a depth of 40 ft., the ore-body continuing strong downwards. Samples of ore taken from here when assayed gave very encouraging results, therefore there is every likelihood of its being of good value at a lower depth. Seeing that there was little or no quartz overhead, work was stopped for the time being at this level, and preparations for sinking the shaft were taken in hand. This work being completed, the sinking of the shaft was proceeded with and will be continued to an additional depth of 130 ft. before opening out for another level. During the past twelve months there has been 620 ft. of driving, 40 ft. of sinking, and other necessary work accomplished. Eight men were constantly employed.

Waihi Gold Reefs Syndicate (Gladstone).—In May last it was decided to erect a cyanide plant, and when this was completed 300 tons of ore were mined and treated. The extraction not being satisfactory, it was decided to erect a Union vanner to concentrate the ore before treatment by cyanide. On completion of erection of vanner, mining and crushing will be proceeded with. The plant consists of a five-stamp battery (900 lb. stamps), ore-breaker, Challenge ore-feeder, a cyanide plant consisting of

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three sand-vats 20 ft. by 4 ft., two agitators, 12 ft. by 8 ft., two slime-collectors, 12 ft. by 6 ft., two precipitating-boxes, two solution-sumps with pumps and elevator, driven by 13-horse-power Tangye oil-engine. Eight men were employed during the year.

Waihi Consols.—This claim was under protection during the first part of the year pending the resumption of boring operations, which was arranged to be done by the Diamond Drilling Company. The boreholes are to be put down a distance of 1,250 ft. for the purpose of locating the reefs which traverse the Waihi Company's property, and from which splendid returns are being obtained. Some four boreholes have previously been commenced; but there was always something breaking, or the hole filling in after a few hundred feet had been drilled. These mishaps prevented the holes from being bored down the depth where it was expected gold-bearing country would be met with; therefore they did not prove what they were intended to do, nor yet give satisfaction to the shareholders. In the month of September the Diamond Drilling Company resumed boring what is termed No. 5 borehole, and this hole reached a depth of 1,225 ft. when the Consols Company stopped it, although it was arranged to bore it to a depth of 1,250 ft.; the reason for doing this was that the cores obtained near the bottom were considered not to be of a favourable description for gold. The shareholders then decided to locate a borehole to the south of the one just finished; and it is intended to put this hole down 1,250 ft. at an angle of 1 in 7, which is considered will be more likely to penetrate the country favourable for gold. From seven to nine men were employed on the boring operations during the latter part of the year.

Waihi South Company.—This property adjoins the Waihi Consols ground, and has been closed down for a considerable period, no work having been done on it during the year. The company have decided to prospect the property by boring, and have been awaiting the opportunity of getting the Diamond Drilling Company to do the work. This, I am informed, has been arranged for, and a commencement made to put the hole down to a depth of 1,000 ft.

Waihi Consolidated Gold-mining Company (Limited).—In the early part of the year a contract was let to the Diamond Drilling Company, who undertook to put down a borehole on a site selected to a depth of 1,200 ft., but after spending a considerable amount of time and money in trying to drill through the boulder formation (which evidently extends downwards to a great depth in this locality) and meeting with continuous obstacles until a depth of 600 ft. was attained, the drilling company decided to surrender their contract, and made arrangements with the owners of the claim to be allowed to remove their drilling plant. A surface-prospecting drive was then started to the north-east of the main shaft, on a piece of rising ground, which was driven a distance of 132 ft., but the country not being of a favourable description for gold, it was stopped and an application made to the Warden for six months' protection, which was granted, to enable the owners to place the property on the London market and thereby raise sufficient capital to develop the mine. Seven men were employed for a time.

Pride of Waihi.—There has been little or no work done on this property during the year. It was fully expected that as soon as the Waihi Extended Company effected communication with the Grand Junction workings driving would be commenced at the 500 ft. level for the purpose of extending a crosscut to tap the water in the Pride of Waihi ground; but as the Waihi Extended Company are at present sinking their shaft, they are are unable to allow the commencement of this drive until their work is completed. The company have applied for protection to give time to enable the raising of sufficient capital to erect a plant and sink in their own ground.

Waihi Beach United Gold-mining Company.—The principal work carried on in this mine during the year was confined to sinking the shaft, which was done by hand-power until a depth of 100 ft. was attained, when the company decided to erect a 14-horse-power Tangye engine and boiler. These have been placed in position, and will enable the sinking of the shaft to be pushed on more expeditiously. The shaft is 12 ft. by 4 ft., and is to be sunk to a depth of 150 ft. before the first level is opened out, where the reef will be intersected in 130 ft. of driving. The reef is 4 ft. wide at the outcrop on the coast-line, and the quartz treated from here at various times is said to have given good payable values; therefore the shareholders are sanguine the mine will prove, when the ore is operated on, to be a payable concern. An average of six men employed.

Ohinemuri River Syndicate.—The result of the work done in 1903 having proved unsatisfactory, the proprietors decided that it was necessary to possess a more effectual method of grinding their ore material, which consists of quartz tailings deposited in the Ohinemuri River. With this object they erected in the early part of the year (1904) a small tube or flint mill. A second-hand rotary roasting-furnace was purchased and four sections of it (of a total length of 13 ft. 6 in.) converted by themselves into a mill, which has proved by subsequent work a most efficient grinding-machine, the product—amounting to 100 tons per week—being so finely ground that from 90 to 95 per cent. would pass through a 200-mesh seive, the bulk of it practically slimed. A serious difficulty arose in the treatment of this exceedingly fine material in the cyaniding-tanks, perfect agitation being necessary to effect a high extraction of bullion. Several months were spent in experimenting to devise the best method of doing this and finally, after considerable work, trouble, and expense, a system was evolved which the proprietors are satisfied is superior to any other up to the present. The tanks used by the syndicate are the invention of the proprietors, and further patent-rights with the agitation process in connection have been applied for in New Zealand, Australia, United States of America, Mexico, and Transvaal. Two thousand tons of tailings has been treated by the improved process, and the extraction of bullion has been highly satisfactory. It is now proposed to increase the capacity of the present plant on the syndicate's Waihi claims to 50 tons per diem, and to erect another and larger plant capable of dealing with 100 tons on its Paeroa claims. The whole of this work will, it is hoped, be completed and in full work before the end of the year 1905. Ten men were employed during the year.

There are also a number of leases held in the vicinity of Waihi which occupy a very large area of ground on which little or no work is being done.

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Waitekauri District.

Waitekauri Gold-mining Company (Limited).—Golden Cross Section.—In order to insure a cheaper and speedier system of testing the position below No. 7 level a diamond drilling-machine has been employed during the year. No. 7 level: Boring operations were commenced on the 14th July, 1903, from this level. No. 1 borehole chamber was constructed in No. 2 crosscut east, 197 ft. from the main north drive, and continued for a distance of 810 ft. at an angle of 18° from the vertical in a west-north-west course. The country penetrated was of a very similar character to that existing at No. 7 level, as revealed by the crosscuts, and it was necessary to case the hole. Owing to unsettled country at places it was deemed expedient to cement the hole. Although veins of calcite were encountered there was no indication of the existence of a massive body such as existed at Nos. 5 and 7 levels. At 800 ft. a much harder class of andesite appeared, but on submitting this for a geological test it was found that the core obtained was identical in nature with that obtained at the beginning of the hole, only instead of being soft and broken, it changed into a harder and more brittle rock at depth. This hole failed to reveal any continuation of the reef system. No. 2 borehole was projected from No. 2 west crosscut at a point 140 ft. west of the main north drive at an angle of 36° from the vertical and continued for a distance of 350 ft. This hole, in conjunction with No. 1 hole, covered the supposed formation for a total width of 335 ft. No. 3 borehole was commenced from the end of No. 2 crosscut west, and continued in a westerly direction at an angle of 35° from horizontal for a distance of 192 ft. The object of this hole was to ascertain whether by any possibility parallel reefs existed in the western wall. Nothing new was elicited by this work. After the completion of these holes it was decided to transfer the drilling-machine to the surface and conduct further boring operations from there. No. 4 borehole was set out at an angle of 37° from vertical (on the surface) so as to intersect the reef system at a point 260 ft. north of the main shaft at a depth of 500 ft. below No. 7 level. This hole has been beset by difficulties from its commencement, owing to the distinctly unfavourable class of country existing, and in which there is no evidence of improvement down to its present depth—viz., 1,105 ft. It may yet be necessary to abandon this hole and commence another one from the surface. No. 1 level: A prospecting crosscut was undertaken at a point 1,000 ft. north-east of the main crosscut from No. 1 shaft. 309 ft. was driven, making a total of 321 ft. from the main north drive. A decomposed class of andesite was penetrated for the full distance driven and no discovery was made. This work has been suspended. Empire Section.—Empire Reef: Considerable prospecting-work has been performed by trenching on the Empire Reef on the surface. The outcrop proved valueless, but it was decided to further test the reef by means of a drive from a crosscut 80 ft. below the surface. A total distance of 327 ft. was driven on the course of the lode—216 ft. north and 111 ft. south. Crosscuts were also put out to prove the full width, but nothing payable was discovered. Realm Reef: With a view of instituting exploratory work on what was known as the Realm Reef, which was exposed some years ago by a crosscut, the work of renewing this crosscut was undertaken. At 350 ft. the reef was discovered and drives were commenced thereon. A total distance of 208 ft. was driven—158 ft. north and 50 ft. south, from 2 ft. to 3 ft. of quartz being exposed. Only traces of gold were obtained by assay, and it was decided to discontinue the work. Waitekauri Extended Section.—No. 3 level: The main drive south on the reef, which had been previously driven 235 ft. from the shaft, was resumed and increased in length to 462 ft. In the course of this extension two crosscuts were made to prove the full width of the formation, which was ascertained to range from 20 ft. to 29 ft. The grade of the ore, however, is low, the assay-results indicating a value of only a few shillings per ton. Surface Prospecting.—During the year four men have been employed (on an average) in prospecting over the surface in the various sections. Considerable driving and trenching has been done in testing the known reefs. This work is still being proceeded with. Old Waitekauri Section.—Prospecting has been proceeding at and above the Horn Level during the year. As a result thereof a block was opened above the Queen Level, which produced 1,652 tons of ore worth £2 15s. 11½d. per ton. Prospecting is now being continued above the smithy level. Milling and treatment: 1,652 tons of ore was crushed for a return of 2,989 oz. of bullion, valued at £4,612 18s. 1d. An average of nineteen men employed.

The New Zealand Jubilee Gold-mining Company (Limited).—During the past year operations in the Jubilee Mine have been mainly confined to the company's low-level tunnel, where the work of driving and crosscutting has been continuously carried on. The actual amount of driving (south) done during the year is 520 ft., also about 200 ft. of crosscutting. This makes the total length of the tunnel 4,350 ft. More than 3,000 ft. of this has been driven on the reef. Work is still in progress at this level, but has of late been rendered slow and costly owing to the heavy flow of water to be contented with. Horn Level: In this level 140 ft. has been driven, 80 ft. on the hanging-wall reef, and 60 ft. on the footwall portion. Work has been suspended here for the past six months. Extended Section: In this section an old crosscut near the surface (known as "Redwood's Crosscut") has been opened up and extended a further distance of 230 ft. Three reefs have been cut, the largest (main reef) 8 ft. in width. Results have not been encouraging, and it is probable operations will be discontinued here at an early date. No machinery has been erected during the year 1904. As to contemplated operations during 1905 no definite scheme has been formulated. The company's directors are considering the advisability of testing at a greater depth, probably by diamond-drilling, and steps are being taken in London to raise further capital. Beyond small sample shipments to London no ore has been treated. Nine men were employed during the year.

Huanui Claim.—This ground, on which a good deal of prospecting had been previously done by the original owners, is at present worked on behalf of a syndicate, who have had two men employed opening up and testing the reef at No. 2 level, from which encouraging prospects are obtained. This level is in a distance of 500 ft., the greater portion being on the line of reef, which is very irregular in size, varying from 3 in. to 6 ft. in width. The shareholders consider it would pay if a small battery were erected in a suitable position on the property, so as to reduce the cost of treating the ore. With

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this end in view they have taken an option of purchase over the Golden Cross 10-head stamp-battery, owned by the Waitekauri Gold-mining Company (Limited), with the intention of having it removed to the mine.

Scotia Claim.—This claim (which is situated west of the Waitekauri Township, and on which a good deal of prospecting-work had been previously done) was recently taken up on behalf of a syndicate represented by Messrs. Morgan and Collins who have been carrying on prospecting operations. They were successful in discovering a small leader from which some very rich stone was obtained, but as it was very small—varying from ½ in. to 3 in. in thickness—the amount of crushing-dirt obtained up to the end of the year was limited. Two men were employed.

Maori Land.—This ground, which was formerly known and worked as the "Young New Zealand," and on which a good deal of work had been done, was taken up early in the year by a syndicate represented by J. M. Haslett, who had previously been in charge of the operations of the old company. He considered that the ground should get a further trial by extending the No. 2 level to a point where it was expected the Welcome Lode would be intersected. Sufficient capital having been raised, a contract was let to a party of six men; and, after driving a short distance, the reef was intersected. It was found to vary from 1 ft. 6 in. to 3 ft. in thickness, and, although no gold has been seen, sufficient work has not yet been done to prove its value. The ventilation became so defective that it was found necessary to give instructions to the manager to have it improved before proceeding further. Six men have been employed.

Owharoa.

Rising Sun Gold-mining Company.—During the first part of the year operations were confined to prospecting the lode at different points, a winze being sunk from the low level to a depth of 43 ft. to ascertain its value. The prospects met with not being considered payable, and the funds of the company becoming exhausted, protection was asked for, and granted, to enable the company to raise further capital. From two to three men were employed during the year.

May Bell (late Waitekauri King) and *Eclipse Falls* have employed two men each, but nothing of importance has been unearthed in either.

Karangahake.

The New Zealand Crown Mines (*Limited*).—The result of operations carried on in this mine for the past year has not, I am sorry to state, so far proved to be of as satisfactory a nature as might be desired. The returns for the period under review show a considerable falling-off on the previous year's output. This is accounted for by the disappointing nature of the developments in the lower levels and a general falling-off in ore-values throughout the mine, which necessitates reducing the crushing-capacity of the battery and the discharge of a number of employees in the mine. The main incline shaft (which is down a depth of 506 ft. below the Waitewheta Tunnel) has been at a standstill during the year, and although a large Worthington pump has been fitted up at the No. 4 level to assist the 12 in. plunger lift, it has not been considered advisable by the management to open out the No. 5 level from the bottom of the shaft, or to sink the shaft to a greater depth. The present pumping plant is considered insufficient to cope with the large influx of water; but this question is, I am informed, at present engaging the attention of the company, the erection of a more powerful pumping plant being proposed. If this proposal is carried out the prospecting and development of the property at deeper levels can be undertaken. On the success of this work the permanence of the mine in a great measure depends. No doubt the cost of winning the ore from deeper levels (should this work be undertaken) will be materially increased by the extra expense of pumping and winding to the Waitewheta (or output) level in comparison with the expense previously existing in winning the ore, a greater portion of which was obtained from the higher levels water-free. One of the principal works in hand at present is the opening-up and prospecting a block of ground (a considerable distance south of the main incline shaft) from the bottom of a winze which was sunk from the No. 3 level to a depth of 242 ft., and on which a small winding and pumping plant driven by compressed air has been erected. This is opened out on the same level as the No. 5 of the incline shaft, which at some future time will be connected; then the trucking will be done at this level and raised up the main incline shaft, instead of up the present winze. From the bottom of this winze the reef (which varies from 3 ft. to 9 ft. in width) was driven on in a southerly direction for a distance of 217 ft., when the great fault was met with which practically cut out all the quartz. The level was continued on the course of a small formation through the fault and disturbed country for a distance of 506 ft., when the main reef was again picked up, with slightly better values. At present a connection is being made by rising and sinking on the reef to the No. 3 level a height of about 240 ft., which will enable the value of the ore between these levels to be ascertained, and also be the means of ventilating these workings. No. 3 level south: This level has been extended 330 ft., making the total distance from the shaft 2,276 ft., the average width of the reef being 3 ft., from which 477 tons of quartz was obtained, yielding bullion to the value of about £1,124. At the close of the previous year a fault was intersected in the level about 2,043 ft. south of the shaft; up to this point the value of the ore varied from £3 to £4 per ton. When the reef was again found on the western side of the fault the value of the ore had fallen to about £1 per ton, and no improvement took place in values until June, when good ore was cut into. This proved to be a rich patch giving an average value for the month of about £5 per ton. In July the value of the ore dropped to 18s. 6d. per ton and the following month to 15s. per ton. The average gross value of all the ore mined during the company's financial year was £1 19s. 8¾d. per ton or 12s. 3¾d. per ton less than the previous year. In the higher levels above Waitewheta tunnel a few parties of tributers are employed working on some of the smaller reefs and leaders, some of whom have obtained payable returns from crushings which were treated at the company's battery. Two hundred and four men have been employed during the year.

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The Talisman Consolidated (Limited).—This company purchased the Woodstock Gold-mining Company's property, and now hold an area of 506 acres. This has given excellent facilities for opening up both sections, and the ground can be worked to better advantage than hitherto. In the Talisman section a large amount of driving and stoping has been done during the year, and with excellent results. The No. 8 level was extended to a point 1,010 ft. south of the shaft, where the ore-shoot in the Bonanza section was intersected early in the year, and considerable development-work has since been done here, with favourable results. No. 10 level: The main drive has been extended to a point 701 ft. south of shaft. This level also has intersected the Bonanza ore-shoot, the reef being larger than in the upper levels and giving payable results. The west crosscut from No. 10 level towards the Tailsman Extended ground is now in 638 ft. without cutting anything of value. No. 11 level: The north drive has been driven 145 ft. from shaft and has reached the boundary of ore-shoot worked in the upper levels. The south drive measures 289 ft. from shaft. It has reached the boundary of ore-shoot and is being continued until it gets into the Bonanza section. Shaft: the shaft is now 183 ft. below river level (Woodstock No. 5), having been sunk and timbered from No. 10 level (350 ft.) during the year. Work for 1905: It is intended to continue driving No. 8 level until it reaches the Dubbo section. No. 10 level will be advanced until it reaches south boundary of Bonanza ore-shoot. In shaft a station has been cut for No. 12 level, 178 ft. below river level and driving north and south from same will shortly be in progress. As soon as drives on No. 12 level are fairly away from shaft, sinking will be again resumed. The general outlook for next year's work is much more favourable than it was a year ago. During the year 1904 the mill crushed 44,888 tons of ore yielding bullion valued at £84,826 10s. 6d. During the year 225 men have been employed.

Comstock Claim.—This ground is situated on the western side of the Talisman and is held by W. Tregoweth, who has been employed with two other men in extending the low level. A body of quartz has been intersected which is underlying very flat and carrying a good deal of mineral, although no rich assays have yet been obtained. It is a good locality, and a shoot of payable ore may be found in driving. Three men were employed.

Shotover Claim.—This ground is worked by C. Miller and party, who have been employed for some time in following up a trail of loose gold with the expectation of locating the reef from which it was shed, but so far have not been successful. A little loose gold is obtained by means of a rocker and ripples, which they have fitted up, but nothing payable so far has been obtained.

Te Aroha District.

Hardy's Mines (Limited), Waiorongomai.—In the early part of the year this mine was worked and owned by Mr. Hardy, but subsequently a company was formed for the purpose of purchasing the property and more fully developing it. The property was taken over and operations were started on behalf of the company in the month of April. The work since completed has been the doubling of the capacity of the water-race, retimbering and lining fire-tunnels, cutting of various watercourses, erection of trestles and fluming and building new dam and sluice-gate. The battery has been extensively enlarged and improved. The work comprises a tram-line from battery store-room to county tramway, a commodious store-room, circular-saw house, four sets of grizzlies, one rock-breaker, two 50-ton hoppers, four automatic Challenge ore-feeders, twenty stamps of 800 lb. each, four electro-copper silver plates each 6 ft. by 5 ft., four Watson-Denny grinding and amalgamating continuous-discharge pans, eight Union Gwynne Head 6 ft. vanners, two Wilfley tables, six berdans, sluice-tables, electric-light dynamo, lathe, and drilling-machines. Three Pelton wheels drive stamps and pans, rock-breaker, and vanners, under a head of 240 ft. of water. The plant is capable of closely saving the values of the ores of this district, and has been specially constructed to save all minerals by concentration preparatory to smelting at Dapto, New South Wales. Operations at the mines are entirely confined to the opening-up of the reef in the lowest level, from which it is intended to connect with the various sections of the company's property. The lode at present being worked is about 15 ft. wide, but the drive is confined to about 5 ft., from which large masses of heavily mineralised ore containing gold, silver, lead, copper, and zinc are being extracted. By selecting the better portions from the battery ore-feeders, ore worth by assay over £12 per ton can be easily obtained, but it is intended, after due trials, to save handling by rough grading at the mine. The battery treatment is purely mechanical and, so far, has proved to be well able to save a high percentage of concentrates values. Formerly heavy penalties were imposed by smelters on ores carrying zinc, but at present no penalty attaches to zinc up to 10 per cent. Above that, 1s. per unit percentage is charged, against which is credited the value of the copper and lead contents, on a most reasonable scale. In order to facilitate the mine-work, a line of piping 1,500 ft. long, giving a fall of over 300 ft. with a 6 in. pipe is being laid down. Meantime a fall of 85 ft. works two small fans and a quartz-hoisting winch designed by the supervisor. The county tramway has been leased for five years. During the coming year work will be vigorously carried on, both in driving and on the reef, in preparation for the more expeditious method of extracting the ore by stoping. The preliminary work in mining is always tedious, but any curtailment of what is warranted by the excellent appearance of the mine to-day will only lead to confusion and the sacrifice of the best interests of the mine. During the year twenty-eight men have been employed.

Cadman Mine.—This property, which has been worked and owned for some time back by T. Gavin and party with fair results, has, I am informed, been recently taken over by a company. It is intended to provide sufficient capital to thoroughly open up and develop the property.

Komata District.

Komata Reefs Mine.—With the exception of extending the No. 4 level northwards into the Te-ao-Marama Section practically no other work has been done here during the year. Te-ao-Marama

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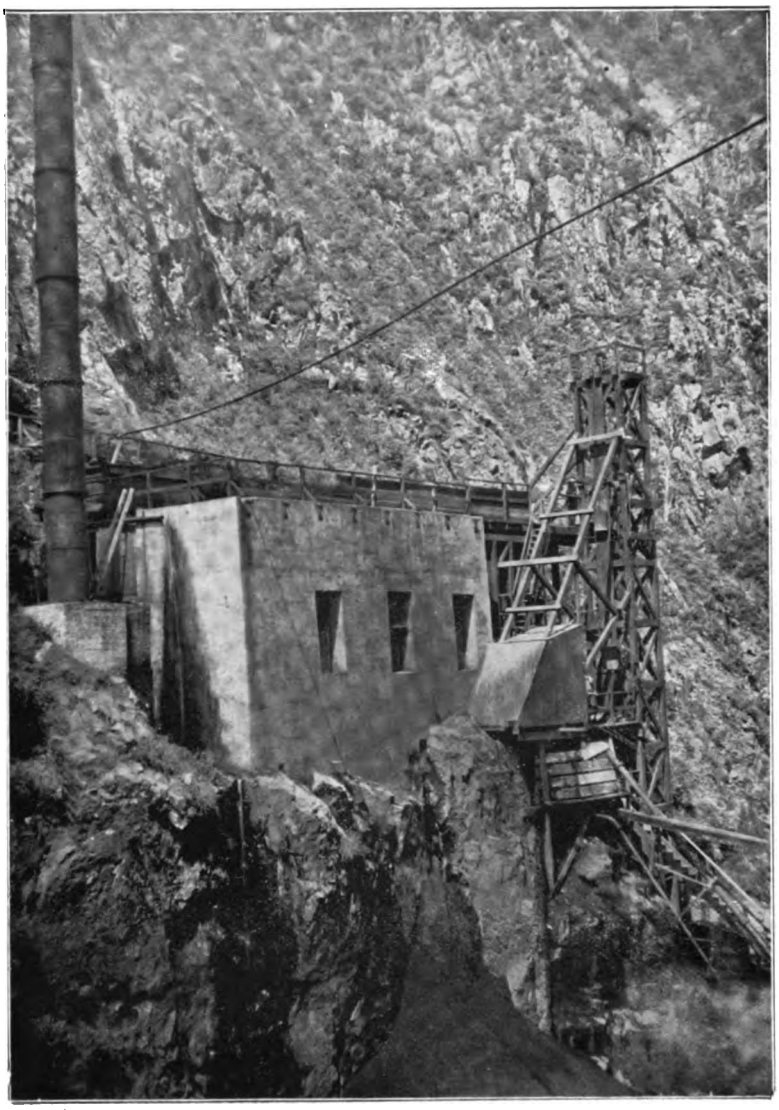
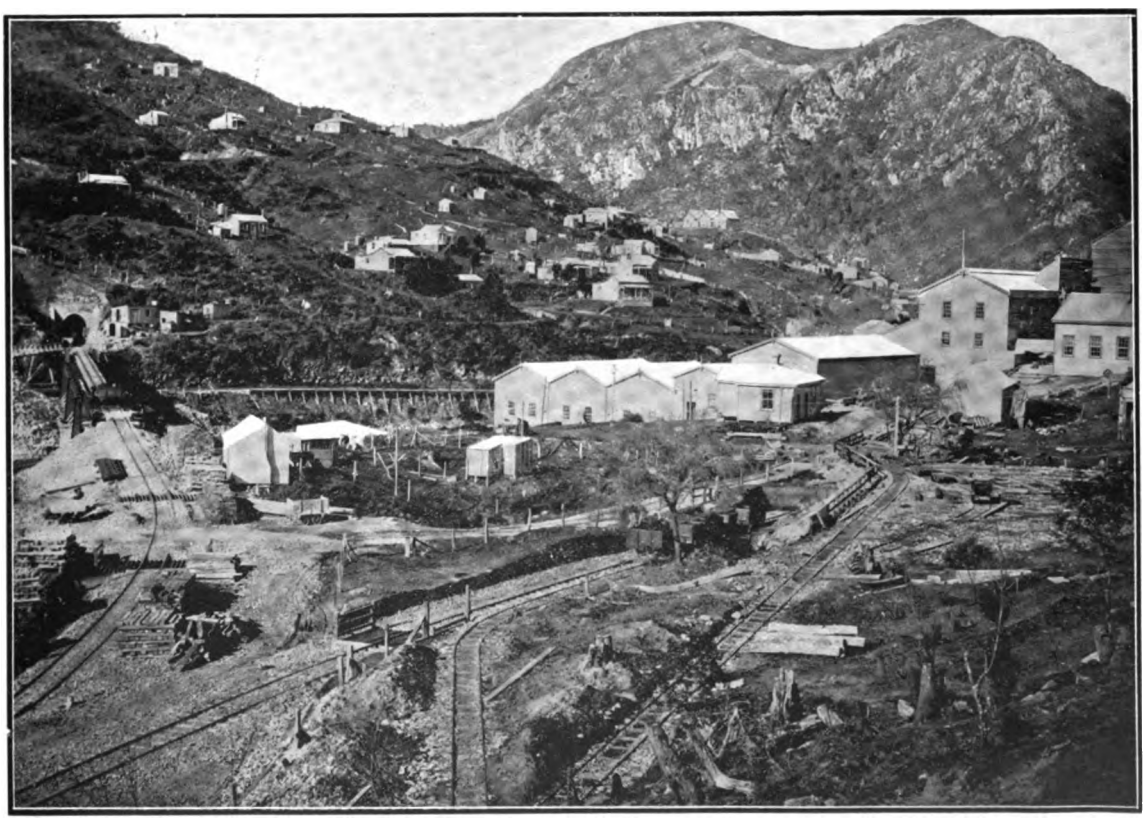


NEW ZEALAND CROWN MINES, KARANGAHAKE.—VIEW OF CONCRETE BOILER-HOUSE, BUILT ON SIDE OF CLIFF NEAR MINE MOUTH.



VIEW OF NEW RAILWAY-LINE AND TUNNEL, ALSO REDUCTION WORKS, NEW ZEALAND CROWN MINES, KARANGAHAKE.

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Section: A good deal of development-work has been done during the year on both No. 1 and No. 2 reefs in Nos. 2, 3, 4 levels, as well as the extension of No. 4 level (Komata Reefs Section) to a point underneath the main shaft, where a rise is in progress to connect with bottom of shaft. The various workings have opened up a large amount of payable ore. Stoping has been carried on from the hopper, smithy, and Nos. 2, 3, and 4 levels. The total number of fathoms broken out was 816 $\frac{7}{12}$ which produced 13,004 tons of ore. Development-work produced 2,796 tons, making a total tonnage of 15,800 tons worth £36,140 8s. 7d. Battery: During the past year several minor additions have been made to the battery, the chief being a small tube mill used for regrinding the coarse sands from the stampers. Steam-power has been used for about six months in the year. The tonnage treated for the year was 15,800 tons from which bullion to the value of £32,559 17s. 3d. was extracted, which enabled the directors to pay £6,666 13s. 4d. in dividends. The average number of men employed during the year was one hundred.

A little prospecting has been carried on in the district, but up to the present no payable discoveries are reported.

Hikutaia District.

New Maratoto Mine.—This mining property was unworked for some considerable time, but was purchased about six months ago, and a company formed to carry on operations. The new proprietary lost no time in trying to find out the value of the quartz broken out and the tailings at the battery. The first work undertaken was the treatment of 100 tons of tailings through the cyanide-vats, which gave a return of 383 oz. of bullion, valued at £90 0s. 2d. This, I am informed, is highly satisfactory, and it has now been decided to put in agitators, which will enable a larger extraction of the precious metal to be obtained than by the ordinary vat-treatment alone. Six men have been employed.

Waimunga Claim.—This claim is situated on the side of the Hikutaia-Whangamata Track, on the fall of the hill towards the east coast. Very rich ore was obtained on the outcrop of the reef. A trial lot of 4,222 lb. of quartz was taken from here and treated at the Thames School of Mines plant for a return of 133 oz. 3 dwt. of gold, valued at £82 13s. 3d. A company was then formed and capital raised to work the ground. A drive is now being put in to intersect the reef about 50 ft. above the outcrop.

Omahu District.

Klondyke.—The company did some work in the early part of the year, and crushed 120 tons of ore for 13 oz. 5 dwt. of gold, valued at £40 9s. 2d.; but as the gold obtained was not sufficient to pay the expenses of mining the ore the mine was stopped and protection again applied for. An average of two men employed.

Puriri District.

Puriri Gold Estates.—A little work has been done here during the year, but as operations were not successful the mine has been closed down.

Miners' Right Claim.—Two men have been engaged here during the year, but have met with very little success.

East Coast District.

Tairua Broken Hills.—The company's attention for the first six months of the year was directed to operating on the blocks of ground opened up over the main adit level, the quartz obtained from here yielding good payable returns of gold; but as these blocks became exhausted it was found necessary to open up new or undeveloped portions of the reefs, and a winze was at once started and sunk on the Blucher Reef to a depth of 80 ft. from the bottom of the main adit level. Here a small engine is erected for pumping water and raising and lowering material as required; and near the bottom of the winze a drive was extended on the Blucher Reef a distance of 100 ft. to the westward of the winze and 15 ft. eastward. A few feet to the westward of the winze 50 ft. has been driven on the Night Reef, from where it junctions with the Blucher Reef. During the year 3,700 tons of ore was treated at the company's mill for 6,728 oz. 4 dwt. of bullion, valued at £10,287 1s. 10d. An average of fifty men employed.

Chelmsford Mine.—This mine was under protection for the first six months of the year, but latterly the company raised sufficient funds to give the ground another trial. The development-work is at present being directed in extending the upper levels on the reef, where encouraging prospects are being met with, and the manager is sanguine that payable blocks of ground will be opened up here. Eighty tons of ore was lately treated at the company's mill for 44 oz. 7 dwt. of gold, and 109 tons of tailings for 117 oz. 8 dwt., the total value of which was £249 7s. 5d. An average of six men employed.

Coronation Mine.—An adit level has been driven into the hill for about 200 ft. This, I am informed, passed through some 50 ft. of rock carrying gold, and to prove the value of it a five-stamp battery is in course of erection and will be completed in a few weeks' time. I carefully examined the rock which is to be treated, but could see no indication of its being a definite lode, and it is the hardest material I have seen that is supposed to carry payable gold. An average of two men have been employed in the mine.

Neavesville District.

Golden Belt Mine.—This company's attention to the work in the mine has been chiefly directed to extending the low level, which is now in a distance of 1,000 ft., and there is still a little over 300 ft. to be driven to reach the point under the payable ore met with in what may be termed the road level. When this driving is accomplished, a rise is to be put up a height of 120 ft. to connect with the level above, and will serve a double purpose—in affording the means of ventilating this part of the mine, and as a pass for the quartz to be put down to the low level, along which it will be trucked out to the bin.

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From here the ore will be conveyed direct to the mill by an aerial tramway. The battery, which is in course of erection and approaching completion, will consist of forty stamps. The ore will be treated partly by amalgamation and partly by the cyanide process. It will take about another six months before all the connections between the mine and mill are finished, and the crushing plant (which will be a complete and up-to-date one) fairly started. An average of twelve men have been employed. There has been a little prospecting carried on in the Neavesville locality, and it is said a find of some importance has been made in a claim formerly known as the "Brothers Claim."

Whangamata District.

Mananu Mine.—I am informed this mine has been pruchased by a syndicate, and that a company will shortly be formed with a view of raising capital to again work the ground, which is considered well worth a trial, seeing that a large quantity of gold was obtained by the previous owners.

Thames District.

New Moanataiari.—In the early part of the year this mine was a part of the Alburnia Mine; then the Moanataiari Section was again taken over by a separate company. The opening-up and development-work was directed to that portion of the mine near the main shaft on what is known as the Cambria Reef. Very encouraging prospects were met with underneath the 400 ft. level, a winze being sunk on the reef to a depth of 65 ft., carrying payable ore all the way down. 582 tons of ore was broken out around the winze and treated at the company's battery (formerly May Queen) for a return of 407 oz. 12 dwt. of gold valued at £1,118 12s. 10d. As all the quartz had to be hauled up by a windlass to the 400 ft. level it was deemed advisable to stop the work on the reef here until a low level could be put in, when it could be worked to better advantage. The work in progress in the meantime is confined to driving on the course of the Cambria Reef westward at the 400 ft. level, where there is a piece of virgin ground unprospected on the strike of some of the Waiotahi and Prince Imperial Lodes, and it is fully expected an important discovery will be made. An average of fifteen men have been employed.

Kuranui Caledonian.—During the past year the above mine has been chiefly worked by tributers, who have won 1,600 oz. 10 dwt. of gold, valued at £4,345 4s. 9d., principally from small leaders which must drop on to the Cambria Reef at No. 4 level. The fact of these small leaders carrying such rich stone, and the recent rich find made in this reef by the Waiotahi Company (in the same channel of country, at their No. 4 level, right opposite this point) has been the means of the Kuranui Caledonian Company reconstructing, with the object of raising sufficient capital to drive a crosscut for this reef from No. 4 level, which is 120 ft. below the Waiotahi No. 4 level. In order to intersect this reef it will be necessary to drive 600 ft. At about this point connection will be made with a winze, which two men have been engaged sinking for the past six months. This winze has been sunk on the Red Queen lead, and colours of gold have been seen for the whole distance—viz., 92 ft. When a connection is made ample ventilation will be provided, and allow the opening-up and developing of this reef to be carried on with despatch. What is known as the Waiotahi Reef in the Waiotahi Mine is, according to plans, identical with the Cambria Reef. There is a considerable area of this well-known reef untouched running through the Kuranui Caledonian ground. With the recent find in the Waiotahi, and the excellent mineral indications met with by the Moanataiari Company, there is every reason to believe that this will prove a valuable block of ground, and be the means of giving this old mine a new lease of life. Ventilation will be provided by means of an air-fan, driven by steam and erected on the surface. The air will be conducted through 10 in. by 12 in. air-boxes down the shaft and into the working-face. It is anticipated that this will provide ample ventilation, and keep the workings free from gas. A borehole was put down a depth of 1,500 ft. near the mouth of what is known as the Long Drive tunnel, but the prospects were of a very disappointing nature, and boring operations on behalf of this company have been discontinued for the present. During the year thirty-eight tributers and five wages-men were employed.

Old Alburnia.—The principal work in this mine has been the main Moanataiari tunnel, which has been driven a distance of 710 ft. In this tunnel the No. 1 and No. 2 reefs were intersected and driven on for a distance of 390 ft. The kindly appearance of the quartz and the assay tests made from time to time led the management to believe that the reef on the back of the level would pay to crush, and, in consequence, some of it was stoped out and sent to the battery for treatment, but proved disappointing, as, after putting 136 tons of ore through, it gave a return of only 20 oz. 2 dwt. gold, valued at £58 14s. 2d. This work was stopped, and the extension of the main tunnel was again resumed. 585 tons of quartz was treated by the tributers for 764 oz. 7 dwt. of gold, value £2,049 18s. 1d. An average of twelve wages-men and forty-four tributers were employed in the mine.

Victoria Mine.—During the first eight months of the year operations in the mine were chiefly carried on by tributers, who did a considerable amount of driving and stoping on the various leaders in different parts, but none of them were successful in discovering anything of a sensational character. During the latter part of the year the directors decided to carry on some development-work on the Mariner's Reef, in the Victoria Section, where blocks of the reef had been left in by the previous owners. Nothing payable was discovered up to the end of the year, but as rich gold was formerly found adjacent to the place where the work is now in progress it is fully expected that gold will be found in payable quantities. Boring operations on behalf of the company (on that section of the property known as the Foreshore) were also carried on with a view to ascertain what depth the solid rock or gold-bearing country would be met with on the seaward side of the beach slide, but after the borehole had attained a depth of 1,016 ft. through broken country, the Goldfields Diamond Drilling Company decided that it would not pay them to proceed further with the hole, and in consequence this (and any other boring that was contemplated by the Victoria company) was stopped for an indefinite period. One hundred and seventy-

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four loads of ore were treated by the tributers, which gave a return of 117 oz. 7 dwt. of gold, value £311 17s. An average of nine men employed.

Kuranui Mine.—This mine has been continuously worked with six men. In the early part of the year the operations were directed to opening up the tributers' lode, which carried a large quantity of mineral of a favourable description for gold, and the management fully expected that a payable chute of ore would be met with. After working on this lode for some time, and finding nothing payable, the company decided to try some of the leaders which had been previously intersected in the Shellback tunnel on the eastern side of the Moanataiari slide. Work has been in progress here for several months, but nothing payable so far has been discovered. Thirty-four loads of quartz were treated for 36 oz. 13 dwt. of gold, value £101 12s. 8d.

Waiotahi Mine.—For the first four months of the year the work was carried on (as previously) on small leaders, which contained gold in sufficient quantities to pay; but, as in other mines, these leaders were eventually worked out. Then it was decided to open up and develop the mine at deeper levels. The first work undertaken was opening out a chamber on the back of the old No. 4 level from the shaft, then a crosscut was driven in an easterly direction, with the object of intersecting the Waiotahi main reef, and connecting with a winze sunk on the foot-wall portion of the reef from the level above, and thus assist the ventilation in this part of the mine. When the crosscut drive had advanced 80 ft. from the chamber, the hanging-wall portion of the main reef was met with, and very rich gold was at once discovered in a highly mineralised portion near the hanging-wall. The reef, when cut through, varied from 15 ft. to 20 ft. in thickness. It yet remains to be seen whether it will prove to be only a patch or a chute of rich gold, either going downwards or upwards; but the first 50 tons of general dirt and 516 lb. of picked stone gave the excellent return of 617 oz. 11 dwt. of gold, valued at £1,667 4s. 11d., which created a good feeling in the Thames district. There was a good deal of work necessary to be done before operations were undertaken at the lower levels—viz., new poppet-legs had to be erected and the shaft repaired. A total of 335 tons of ore and 516 lb. of picked stone were treated during the year for 1,236 oz. 13 dwt. of gold, valued at £3,364 5s. 4d. During the year an average of twelve men were employed.

Fame and Fortune Mine.—The company have done no work in the mine during the year. That done has been entirely carried out by tributers, who have for some time past directed their attention to working on various leaders carrying gold, but were not successful in finding anything of a really payable character. During the year fifty-one loads and 51 lb. picked stone were treated for 90 oz. 16 dwt., valued at £255 12s. 4d. Eleven men have been employed.

West Coast Claim.—This claim is still owned by John Northey, who has continuously worked the mine, but unfortunately he has not met with much success during the year. Nineteen and a half loads of general dirt were treated for 18 oz. 4 dwt. of gold, valued at £47 15s. 6d.

Ballarat Claim.—This mine has been continously worked by the owners (John Brett and party), who have done a considerable amount of work in driving a level in from the side of the hill to open up a leader which they considered would pay to work, and have been successful in getting gold; but whether it will pay them for the extra work they did remains to be seen. They had 52 tons treated for 107 oz. 12 dwt. of gold, valued at £333 11s. 10d. Three men were employed.

Nonpareil Mine.—This mine has been entirely worked by tributers, the work being confined to driving and stoping on the Liverpool Boys and Wade leaders, which vary from 2 in. to 10 in. in thickness. On the former leader, 150 ft. of driving was done, and stoping 150 ft. in length and 30 ft. in height; also underhand stoping was done under the level for 100 ft. in length and 10 ft. in depth. The quantity of ore treated by the various parties employed amounted to 155 loads, which yielded 232 oz. 17 dwt. of gold, valued at £645 10s. 3d. Nine men have been employed.

New Saxon Mine.—This ground was formerly a portion of the May Queen Hauraki, but in the early part of the year it was taken over by a separate company, who have confined their operations to work on the No. 2 level from the Saxon shaft in the Cardigan Section. A leader, 8 in. in thickness, has been driven on for a distance of 400 ft. east from the crosscut leader. There has been no quartz crushed yet from this leader, but in breaking down gold has been frequently seen, which leads the manager to believe that it will prove payable when opened up. A large extent of this leader is intact both above and below the level named, and work is to be pushed on with all possible speed to develop it, and a rise put through to the surface. This will be the means of ventilating this part of the mine. Two hundred and twenty-one tons of ore was treated from other leaders worked, giving a return of 138 oz. 7 dwt. of gold, valued at £370 13s. An average of eight men were employed.

New May Queen Mine.—This mine is situated in the Waiokaraka, and comprises an area of 93 acres. It was formerly part of the May Queen Hauraki property, but has recently been taken up by another proprietary. Work was immediately commenced and directed to the repairing of No. 3 level on the No. 4 lode, with the object of reaching the Old May Queen shaft, for the purpose of securing ventilation. When this is accomplished, it is the intention of the company to drive a crosscut easterly to intersect the St. Hippo reefs. Should the water be pumped out low enough in the Queen of Beauty shaft to unwater the reefs at a lower level than that already worked, extensive works will be undertaken to open up blocks of ground on the No. 4 and North-west lodes. Four men were employed during the latter portion of the year.

New May Queen Extended Mine.—For the first eight months of the year the operations were conducted on the Marion Reef, which varied from 1 ft. to 4 ft. in thickness. On this reef a considerable amount of driving and stoping was done, but as this did not prove payable, work here was stopped for a time. When work was again resumed a crosscut was driven along the boundary of the New Una and this company's mine for a distance of 150 ft. Three leaders were intersected—the first cut through was 6 in. thick, and in breaking out the quartz colours of gold were seen; the second, being No. 7 Reef (which was from 1 ft. to 5 ft. in thickness), was driven on for a distance of 60 ft., the prospects

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met with being very encouraging; several pounds of picked stone were obtained. The third leader is about 18 in. thick, but no driving has yet been done on it. One hundred and sixty-six loads of quartz were treated for 97 oz. 10 dwt. of gold, valued at £268 3s. Seven men have been employed.

New Una Mine (formerly known as the Success).—The work in hand at the commencement of the year was the extension of the low level, which was driven in an easterly direction with the object of passing through the Moanataiari main slide to intersect the Loyalty and other lodes known to exist in this portion of the company's mine. At a distance of 690 ft. from the entrance of the level named, a lode-formation was met with. This showed gold, and was operated upon in a northerly direction. Twenty-five loads of general dirt and 50 lb. of specimens were obtained, which, when treated, gave a return of 89 oz. 4 dwt. of gold, valued at £224 2s. 6d. A drive was then extended on the lode-formation for 125 ft., and a rise put up on it to a height of 115 ft., but owing to a strong stream of water being met with in the rise, and no more payable gold found, work here was discontinued, and the main drive was extended through the main slide, which proved to be 80 ft. thick, and composed of a clay and rubbly formation. After passing through this, a reef 18 in. in thickness was discovered showing colours of gold, but after driving 100 ft. on it in a northerly and 50 ft. in a southerly direction without finding gold in sufficient quantities to pay, the work was stopped. It was then decided to apply to the May Queen Extended Company for permission to use the Adelaide No. 3 level, the face of one of the drives being nearly up to this company's boundary. Permission being granted, the extension of the drive named was at once commenced, with the result that three leaders were intersected, within 109 ft of driving, all of which carried gold. The No. 2 leader is being driven on along the boundary, where very encouraging prospects are being obtained in the May Queen Extended ground. The No. 3 leader, which is 48 ft. inside of No. 2 leader, is being worked by the company, and varies from 15 in. to 18 in. in width. This has been driven on for 60 ft. in a westerly direction, and in breaking out the quartz gold is frequently seen. A leading stope is now being carried along on it on the back of the drive, which latter has been securely timbered up, and it is fully expected that the block will prove payable. Five men have been employed.

The Arundell Syndicate (*Limited*) embraces the Gloucester Extended and George Turnbull Claims, and is situated up the Karaka Creek. The operations carried on by this company in the mine during the year have been principally in the nature of devlopment-work. In addition to this, a five-stamp battery with three berdans has been erected, and water-race and tramway constructed, the whole of which will be connected with the mine in the course of a month or two, when crushing will be commenced. The machinery will be driven by a semi-portable engine of 65-horse power. An average of eight men have been employed at the mine and mill.

Golden Drop Claim.—The work in this mine has been confined to sinking a winze on what is termed a "dropper," driving 80 ft. on it and stoping out the block to the level above. As the prospects are encouraging going down, the shareholders intend to drive a low level to open up another block of ground. Four tons of ore were treated for 46 oz. 16 dwt. of gold, valued at £122 13s. 5d. Two men have been employed.

Claremont Claim.—This claim is situated up the Karaka Creek, and comprises a small area of ground owned by George Bryant, who treated 50 lb. of specimens for 29 oz. 12 dwt. of gold, valued at £79 18s.

Fortuna Mine.—Very little work has been done in this mine during the year.

Mascotte Mine, Otanui.—This claim comprises an area of 100 acres, and is held by a syndicate who have worked the ground continuously during the year. The operations were directed to sinking a small shaft to a depth of 50 ft. for the purpose of proving the value of the lode at a deeper level than that already worked, and from which a large amount of gold was obtained some years ago. When the lead was met with in the drive and opened out, at 50 ft., a large amount of water was tapped, and gave considerable trouble to keep down by hauling with buckets. It was then decided to put in a 4½ in. diameter plunger pump to raise the water to the surface, and this has answered the purpose admirably and at a small expense. Some very rich specimens were obtained in the lead intersected at the level named, and the prospects met with are such as to give the shareholders encouragement to sink the shaft another 50 ft., where the mine will be opened up by driving, &c., to more advantage. One and a half tons of quartz and 21 lb. of picked stone were treated for 12 oz. of gold, valued at £32 7s. 5d. Four men have been employed.

Tararu Mine.—Work in this mine has been confined to development pure and simple, and includes the reopening of the workings in the Day Dawn Reef and sinking a winze on same; driving a new low level in the Sunbeam Section and putting up a rise on the reef; also putting up from the battery level a new rise to connect with the old Sunbeam rise. The old rise from 50 ft. to 110 ft. having caved in it was deemed best to make a new connection above the bad part; this has been holed through, and, when the timbering is completed, the company will be able to handle stuff from the Sunbeam Reef without trouble. The Day Dawn crosscut at the battery level has been extended to the boundary, and it is now intended to drive on the reef so as to get under the lowest workings on the Day Dawn and Norfolk Reefs, and then open up these veins from 240 ft. to 350 ft. below the old levels.

Eclipse Mine.—The work in this mine was directed to extending the low level to a position under the run of gold worked from the level above. The country passed through in this drive was very changeable, some parts being very soft and ground subject to swell, thus requiring to be closely timbered. When the required distance was reached a connection was made between the two levels by rising and sinking on the reef. Just over the back of the low level very rich specimens were obtained, and stoping is now in progress. The reef here varies from 2 ft. to 8 ft. in thickness, and the first crushing of 133 tons treated at the end of the year produced 300 oz. of gold, valued at £867 10s. The prospects of the mine for the new year look exceedingly promising. An average of eight men have been employed.

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Waiomo District.

New Monowai Mine.—This mine, which was formerly known as the Monowai, has been unworked for the greater portion of the year. It was recently bought by a syndicate who formed a new company under the title of "The New Monowai Gold and Silver Mines (Limited)." The company has let a contract to drive 1,000 ft. on the reef, to prospect the same, and get under the run of rich ore formerly worked by the old company. A small quantity of rich quartz which had slipped off the cap of the reef has recently been obtained on the surface. No ore has been treated during the year. Three men have been employed for three months of the year.

Tapu District.

Mahara Royal Mine.—The operations in this mine were chiefly confined to sinking two winzes below the floor of the main adit level on the reef and stoping out from those winzes. In driving from the bottom of the first winze sunk, the reef pinched out in the drive, and after stoping out the small block upwards work here was discontinued. Then the second winze was sunk from the bottom of the same level, but nearer the crosscut. The reef in the winze was 6 ft. thick, and carried a fair amount of mineral amongst which gold was frequently seen, but as will be seen by the returns it is low-grade ore; the reef is very irregular, opening out and pinching in suddenly. 1,874 tons of ore was treated for 585 oz. 7 dwt. of gold, valued at £1,785 6s. 7d., an average of ten men were employed.

Sheridan Mine.—This mine was worked in the early part of the year by a company, but not being successful in finding payable ore, the company decided to dispose of the property, and it was sold to Plummer and party, who are working the ground with two men.

Gumtown District.

Kapowai Mine.—This mine is owned and worked by M. O'Connor. In the early part of the year he had a small crushing of 45 tons taken out which yielded 38 oz. 16 dwt. of gold; this convinced him that the lode formation would pay to work if there was a cheaper and better method of getting the quartz from the mine to the mill. He at once commenced and put down a self-acting tramway from the battery up the hill to near the level of the lowest drive, then a ground tramway from the top of the self-acting tramway mentioned to the mine. This has been a great saving in the conveyance of quartz to the mill, and for the last four months of the year 485 tons of quartz was treated for 474 oz. 4 dwt. of gold, valued at £1,087 17s. 6d., which is said to have paid handsomely.

Twelve men were employed.

Big Beetle.—This mine was worked by the company for the first seven months of the year with eight men, but as it could not be made to pay working-expenses absolute protection was applied for and granted. Latterly the mine and battery were let to a party of tributers, who informed me that from the appearance of the mine and the ore they had treated it would pay them good wages. Two hundred and three tons of ore was treated during the year for 280 oz. 16 dwt. of gold, valued at £715 17s. 10d. Three men are now employed.

Coromandel District.

Old Hauraki Mine.—During the past twelve months the actual mining underground has been very much handicapped on account of the magnitude of the work in cleaning out and repairing the shaft, and pumping out the water to the bottom level (400 ft.), and putting in a new plunger at that level with all the necessary gear required. This was a long and expensive job. The shaft had been stripped and all the timber allowed to go down the shaft, which made it very difficult to get through and repair. The draining of the adjoining mines and the surrounding country occupied from the 12th May until October, with a considerable staff of men, which materially reduced the number of men available for actual mining. However, a considerable amount of work has been done at the 100 ft., 160 ft., and 220 ft. levels, such as driving on the various leads, rising, sinking, and stoping on the same. From these 171 tons of ore was selected, which produced 315 oz. 9 dwt. of melted gold, of a total value of £953 8s. 3d. There was also a considerable amount of crosscutting and prospecting done at the levels above-mentioned. As soon as the water was out at the 400 ft. level, preparations were made to prospect and develop the mine at the deep levels. The north drive was cleaned out and repaired, and a tram-line laid for a distance of 500 ft. A rise was put on No. 1 cross lead, some of the stone exposed showing a kindly appearance. There was also an intermediate level driven midway between the 300 ft. and 400 ft. levels, a distance of 56 ft on No. 7 lode, and a rise put up 40 ft. on the same lode. This was practically all the work done at that level. Pumping was expensive, and none of the owners of adjoining mines would contribute towards the expense of keeping the pumps going. Consequently, this company decided to stop the pump and allow the water to rise, so as to prove which mines were benefited by the company's pumping. This was done on the 19th November, a week later the adjoining mine was drowned out, and operations had to be suspended. In fact, all the surrounding mines have abandoned their lower workings and have started work in shallow ground above the water-level. In the Hauraki Mine work is at present being carried on in the 100 ft. level, driving a crosscut to prospect and develop a large section of ground situated between the Union Beach and Hauraki rich chutes of gold. So far this section has had little or no work done on it. Being in the golden belt the chances are that good payable ore may be discovered, and if proved so the ground offers scope for extensive work, as it is intact in all the deeper levels. The surface portion of the mine is divided into fair-sized sections. Five sections are let on tribute, employing twenty men. The water is now up to within 6 ft. of the 100 ft. level. Twenty men have been employed.

Bunkers Hill Mine.—The operations in the early part of the year were directed to stoping on the Iona leader above No. 2 level; but as this leader pinched out going up, and was cut off by a break near

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the Hauraki Freeholds boundary, work here was discontinued. The men were then employed to sink a winze and in stoping on a leader which produced some very rich stone and good crushing dirt. Owing to a disagreement with the Hauraki Company in regard to pumping the water out of the mines, and that c mpany subsequently stopping the pumps, the water rose in this company's workings and all work here ceased. The work in hand in the latter part of the year was driving an adit level into the hill from the seaward side, into what is said to be untried ground; but so far no leaders of any importance have been met with. Thirty-three tons of general ore and 110 lb. of specimens were treated during the year, for 189 oz. 5 dwt. of gold, valued at £581 1s. 6d. Ten men have been employed.

Hauraki Freeholds Mine.—In the early part of the year the work in the mine was confined to working on the Iona leader from the Bunker's Hill shaft, but work here was suspended in the month of April, and the company's attention was directed to unwatering the northern part of the mine which, owing to a fault running nearly east and west, prevented the water from finding its way into the Bunker's Hill side of the fault. Therefore it was found necessary for this company to start raising the water (which had collected) at the Welcome Find shaft by their own machinery. The water was soon lowered below the No. 1 level, where development-work was commenced and was carried out with varied success. Finding the method of raising the stuff to the surface and winding the water with the engine was incurring a large amount of expense, it was deemed advisable to erect a brake and run a water-tank down an inclined tramway, and by this means (a revival of the old water-balance method of winding) raise the quartz up an old shaft a height of 80 ft. The method appears to answer the purpose, and has effected a considerable saving. During the year 103 tons and 314 lb. of picked stone were treated for 922 oz. 17 dwt. of gold, valued at £2,698 5s. 9d. Fourteen men have been employed.

Success Mine.—Two miners had this mine on tribute, and had 147 tons of mullock or tippings crushed for 84 oz. 5 dwt. of gold, valued at £202 4s. 4d., but the owners, not getting enough out of it to pay the interest on the cost of the battery, had it taken down and removed to the township.

Golden Pah Mine.—During the year this mine was solely worked by tributers, who obtained from various leaders 38 tons of ore, which gave a return of 184 oz. 14 dwt. of gold, valued at £554 2s. Four men have been employed.

Golden Spark Mine.—This company is carrying on operations in the mine from a low level on the side of the creek above Scotty's battery. The country is hard and the leaders small. In the early part of the year the company were not getting sufficient gold to pay and had partly stopped the work, when Mr. Daldy said he was confident he would find payable gold if they would allow him to drive some 30 ft. to cut a certain leader. This was eventually done, with the result that gold has been got out to pay expenses under Mr. Daldy's supervision. Seven tons has been treated for 60 oz. 5 dwt. of gold, value £160 15s. Two men are employed.

Harbour View Mine.—The principal work for the past year has been driving a crosscut from Harbour View No. 4 level, with the double object of prospecting this section of the mine and also to intersect the leaders in the Associated portion at a depth. This drive is in a distance of 527 ft. A further distance of 30 ft. should intersect the first of the above leaders and will be approximately 104 ft. deeper than the lowest of the Associated workings. A considerable amount of work has also been done on different leaders on both Harbour View and Associated Sections, but the results have been practically nil. I may mention that the above undertaking has been a very costly one, owing to the light nature of the country met with. Nine men have been employed.

Kapanga Special Quartz Claim.—There has been but little done in the development of this mine during the year. A party of men have it on tribute and are only directing their attention to selecting and crushing mullock-tips. Two men were employed, who treated 115 tons for 66 oz. 1 dwt. of gold, valued at £158 10s. 4d.

New Hero Mine.—The shareholders in this mine did a good deal of practical work, but were very unsuccessful in finding anything of a payable character. From one of the leaders 8 tons of ore was broken out and treated for 8 oz. 10 dwt. of gold, value £25 10s. Two men were employed.

West Tokatea Mine.—In the early part of the year this mine was under protection, but operations were again resumed under the management of Mr. R. Harrison, who directed the work to opening up the various leaders, with a fair amount of success, the mine having paid its way and left a small margin of profit for the last four months of the year. Twenty-seven tons of ore and 176 lb. of stone were treated during that time for 167 oz. 9 dwt. of gold, valued at £470 17s. 3d. Ten men have been employed.

Monte Christo Mine.—This claim is situated on the top of the Tokatea Hill and was formerly called the Queen of the North. During the past year the works carried on have been driving the No. 1 crosscut for a distance of 153 ft., and No. 2 crosscut has been extended 130 ft.; several reefs have been cut through varying in thickness from 3 in. to a 1 ft. Five hundred pounds of stone from these were treated at the Public Battery, which yielded 8 oz. 5 dwt. of gold, value £18 17s. 3d. In November protection for three months was obtained for the purpose of raising capital to extend the Ida tunnel a distance of 400 ft., with a view of cutting the Swedish Crown, Queen of the North, Day Dawn, Peep of Day, and Cross reefs, from all of which rich stone had been obtained in the early days. The tributers who are working in the Masonic section of the ground are seeing gold in a small leader about 5 in. in width. Nine men have been employed.

Royal Oak Mine.—The operations during the year have been chiefly directed to that portion of the mine where a large amount of gold has been obtained from time to time from the Tokatea Reef, and from what may be termed "droppers" or leaders. The Tribute leader is the principal one worked this year between the No. 4 and No. 6 levels, a total of 1,000 ft. having been driven on it, and 5,472 ft. of stoping done on the leader, from which 1,027 tons of ore was treated for 3,339 oz. 17 dwt. of gold, valued at £9,110 1s. 7d. This would appear as a highly payable return, but the country is of a very hard nature, consequently the cost of getting the ore is necessarily high, and therefore only a small margin of profit is left. The blocks of ground being worked here are nearly exhausted, and the manager

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is now directing his attention to various other works—viz., opening up ground and exploring the leaders at the intermediate levels below No. 6, and also repairing and carrying on development-work at No. 7 level. Forty-six men have been employed.

Four in Hand.—During the last twelve months the new low level has been extended a distance of 233 ft., making the total distance of the tunnel 588 ft., and there yet remains some 500 ft. to be driven to complete it to the point under which the rich run of gold was obtained in the upper workings. On the Tainui Reef 32 ft. has been driven, 44 ft. of sinking done, 12 ft. of rising, and a block 20 ft. by 10 ft. stoped out. On the Four in Hand a block has been stoped out 92 ft. by 72 ft., and in the No. 4 level, 130 ft. of driving has been accomplished upon the Footwall Reef; the various works in progress are to be pushed on with all possible speed. Two hundred and fifty-three tons of ore was crushed for a return of 340 oz. 13 dwt. of gold, valued at £989 8s. 6d. An average of ten men were employed.

Cabbage Bay District.

White Star.—This company had two men employed during the greater part of the year, but the ground being hard and the leader small only a limited amount of quartz was obtained. 1 ton 5 cwt. of ore was treated for 27 oz. of gold, valued at £75 5s. 3d.

Kuaotunu District.

Waitaia Mine.—During the year this mine has been steadily worked, but work has been principally confined to stoping on the various leaders opened up over the back of the low level, from which 1,119 tons of ore was broken out and crushed at their own mill for a return of 2,033 oz. 1 dwt. of gold, value £6,063 10s. 9d., this being an increase of £1,526 8s. 6d. as compared with the previous year. There has been very little development-work carried on for some time past, and as the blocks of ground now operated upon will in time become exhausted, the company contemplate putting in a low level at an early date to open up new ground at depth. They anticipate this will prove to be richer in gold than that worked out at any of the upper levels. Twenty-one men have been employed.

Handsworth Mine.—This ground is still worked by two men, but the year's operations did not prove as remunerative as those of former years; but the owner is sanguine of dropping on payable ore during the coming year.

Otama Mine.—This mine adjoins the Handsworth Claim, and has been worked continuously during the year with three men who did a large amount of driving and stoping on the leader in the early part of the year. Some very rich stone was obtained in the low level, and it was fully expected that a payable block of ground was being opened up. On rising it proved very disappointing, as the gold did not carry up as good as on the level; still the proprietors are in hopes of coming on a payable chute of gold again. One hundred and eleven tons of ore was treated for 167 oz. 19 dwt. of gold, valued at £410 12s. 9d.

Great Mercury Mine.—In the early part of the year the low level was extended a further distance of 70 ft., making the total distance of the drive 600 ft. In consequence of gold not being found the extension of this drive was stopped for a time. The owners then commenced driving on the reef penetrated in the main crosscut, which is now in a distance of 250 ft. The country passed through is very hard, and no gold being found makes it very discouraging to the shareholders, who went in with good hopes, believing there would be no difficulty in finding payable blocks of ore. Two men are now employed.

The following mines have been worked with one and two men, but nothing of any importance discovered: Hauraki No. 2, South Kapanga, Vaughan, Prospero, Rangitara, Exact, Whangapaoa, Owera, and others.

Great Barrier Island.

The Barrier Reef.—The only work carried on in this property during the year was confined to treating the tailings at the battery. 3,119 tons were put through for 10,646 oz. 18 dwt. of bullion, valued at £2,380 18s. 3d. Two men employed.

Sunbeam Gold and Silver Mine.—This mine comprises an area of 99 acres and is situated at Blind Bay, Great Barrier Island. The development-work carried out during the year was the extending of the No. 1 level a distance of 437 ft., and for the whole of that distance good payable ore has been unearthed. Battery-site: A battery-site has been purchased on freehold property, the necessary amount of excavation done, and the building erected. A five-stamp mill, three Frue vanners, twelve vats, towers, sumps, and all necessary gear have been purchased, also engine and boiler, and will be erected as soon as possible.

Accidents.

During the year three fatal accidents happened in this district, as against eight in the preceding year.

Date.	Name.	Name of Mine.	Cause.
June 21 ..	Arthur E. L. Mathias ..	Waihi Gold-mining Company	Crushed by collapse of cribbing in pass.
October 7 ..	Jans C. N. Dahl ..	Waihi Gold-mining Company	Killed by fall of mullock in stope.
December 10	James Mann	Moanataiari	Killed by a fall of rock from hanging-wall of reef in stope.

I have, &c.,
James Coutts,
Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

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Mr. ROBERT TENNENT, Inspector of Mines, Westport, to the UNDER-SECRETARY FOR MINES, Wellington.

SIR,— Inspector of Mine's Office, Westport, 3rd April, 1905.

I have the honour to report as follows on the gold-mines in the Marlborough, Nelson, and Westland Districts for the year ended the 31st December, 1904.

QUARTZ-MINING.

BLENHEIM.

Wairau Gold-mining Company.—This company is a reconstruction of the Jubilee, Luck at Last, and the Wellington Mine proprietaries. Since operations were resumed under the new title a contract has been let to extend the Jubilee low level a further distance of 300 ft., in addition to the 160 ft. formerly driven by the late company. At the termination of the original driving, the lode was intersected and stoped to the surface, and provision made to maintain a securely timbered pass for ventilation purposes. 20th January, 1905: Driving was extended 110 ft. on the new contract, but according to the distance calculated to intersect the main lode, a further driving of 800 ft. will be required, making the approximate length of tunnel 1,260 ft.

Mr. J. H. Evans (late manager of the Jubilee Mine) has three men employed prospecting in the Patriarch district on behalf of a Wellington syndicate, who intend to introduce foreign capital, provided the results obtained afford sufficient inducement to carry out more comprehensive development.

Arm Chair Creek.—According to information received from the Mining Registrar at Blenheim, all quartz-mining privileges have been surrendered in the Arm Chair district.

HAVELOCK.

The Golden Bar and Yorkshire Federated.—These respective areas of 46 and 34 acres, are the only leases now held in the Wakamarina district. The neglected appearance of these properties does not say much for their prospects. Work is at a standstill.

Mining on the Wakamarina Valley is still confined to a few old fossickers, who rake the river-bed in very low water.

COLLINGWOOD.

Golden Ridge (Taitapu Gold Estates—James Carroll, Mine-manager).—Operations are continued on the Anthill and Ridge Sections of the property. The ore-bodies operated on being notably short, economy in operations is necessary to make ends meet. In the Anthill Section the surface stopes are practically exhausted and connection completed with the lower level to facilitate ventilation and the passing of ore, whilst the Ridge district is worked from a flat winze sunk in the underlay for a distance of 120 ft., the stopes being opened from the winze in order to effect the simplest method of conveying the mined ore on the flat gradient, whilst the exhausted ground is efficiently packed with the surplus *débris* as the face is advanced. The principle of working these thin flat lodes compares favourably with the system of longwall, so successfully worked in thin coal-seams. The stone milled—646 tons—yielded bullion to the value of £3,069 1s. 5d., which shows a decrease of £5,294 15s. 10d. as compared with the values won in the previous year.

Golden Blocks (Taitapu).—Mining operations continue to be actively maintained and the varied developments connected therewith are kept well in advance of battery-requirements. The No. 3 or low level has, after considerable driving through very doubtful ground, intersected a thin lode which gives payable results, whilst connection was readily effected for ventilation and passing through a winze from No. 2, the mined ore from the upper levels being thus passed direct to the main hopper, and conveyed by horse tram-line to the milling plant, which consists of eight head of automatic-feeding stamps. In connection with the mining privileges recently acquired from the Taitapu Gold Estates at Friday Creek, there are five miners regularly employed in carrying out an effective system of prospecting, which so far appears to afford considerable promise of a valuable addition to the property. Timbering and ventilation are special features in the working operations, and the plant is maintained in good order. 2,411 tons of ore was milled, yielding bullion to the value of £8,764 12s. 9d., which, when compared with the values of the previous year, show an increase of £534 12s. 9d.

WESTPORT.

Red Queen (Mokihinui).—This energetic tribute party of three men, after a lengthened period of dead-work, have exposed more favourable prospects, the lode showing considerable increase in size and value.

Lady Agnes (Mokihinui).—This property is abandoned.

Britannia Mine.—Mining continues to be actively pushed—the milled stone (765·5 tons) yielded 635 oz. 12 dwt. 13 gr., with a bullion-value of £2,506 15s. 10d. Output continues to be mined from Nos. 4 and 5 levels, which are extending more into the hill country, the reef showing a more defined character. Operations in the face are very securely timbered and packed with the surplus *débris* as the work is advanced, the system being favourably suited to keep the ventilation up to the face.

Stony Creek.—This property is abandoned, and the company under liquidation.

LYELL.

Alpine Extended (Frederick W. Prince, Mine-manager).—The varied mining operations which continue to be actively and persistently carried out north and south on No. 12 levels fail to unearth profitable values. In extending No. 12 south a further distance of 69 ft. the developments did not win stone of any commercial importance, the ore being of very low grade, whilst driving the

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intermediate level between Nos. 11 and 12 a further 60 ft. on the bottom of the lode it eventually pinched out, when the block was stoped to No. 11. Driving north was then extended 100 ft., and connections completed with an old winze from No. 11, when a short block 83 ft. in length was stoped to 60 ft., the lode cutting out. Crosscutting was continued into the foot-wall in No. 7, but the unfavourable character of country did not warrant further expenditure in that direction. In view of proving the formation between Nos. 10 and 7 levels, No. 10 south was driven 150 ft., and surveys completed to rise and connect with a winze which was sunk from No. 7 about five years ago. This work is now operative, and the calculated rising is approximately 233 ft. Ventilation will be effected by compressed air. It may be stated that the old winze (after standing under water for five years to a depth of 115 ft.) was baled out, the water containing no indications of gas or stench of a poisonous nature. Workings are securely timbered and well ventilated. Temperature in shade at noon was 54°, and the return airway 56°. The stone mined yielded—by amalgamation (2,630 tons) and cyanide (2,225 tons)—a bullion-value of £5,76 11s. 7d.

The Italy Syndicate (late Tyrconnel).—Kelly and party of four men continue to work this property on very successful lines, care being taken to keep development well in advance; but a proper road is much wanted to convey mining-material.

Boatman's.

Welcome.—This mine was let on tribute to O'Leary and party for a term of three years, commencing from the latter end of 1903. From date of starting they continued to work the property with exceptional success until May last, when, notwithstanding the very liberal inducements offered in the form of future development, they abandoned the tribute. During the period worked, they milled 382 tons of ore for a return of 435 oz. 14 dwt. 21 gr. of gold valued at £1,726 15s. 9d., besides which 225 tons of tailings was treated, yielding bullion to the value of £396 4s. 4d. The company carried out development-work for some time after the tribute was abandoned, and then obtained six months' protection to enable the wishes of the London office to be consulted.

Kirwan's Reward.—In connection with the development of this property more than usual energy has been exercised to open an important section of the working to the south-west, this section of the field having always been looked forward to with favour, and more especially as the ore-bodies, exposed in the four faces now being worked, give promise of yielding values considerably in excess of anticipations. The extension of the aerial tramway across the plateau will also facilitate operations and put the company in a very comfortable working position for some time to come. During the year 6,250 tons of ore was treated, yielding 1,949 oz. 19 dwts. 15 gr., giving a bullion-value of £7,764 16s. 7d.

Lady of the Lake (Owner, A. McKenzie).—The rise level intersected a small block of stone at 50 ft. from day, but although of fair value the block is very short and does not extend upward. Its values have not yet been proved on lower levels. The ground is securely timbered, and since holing was effected with some old workings the ventilation has been very good.

Reefton.

Wealth of Nations.—Development-work has been practically at a standstill during the year. Maintenance of main roads, &c., has been well attended to. Stoping has been carried out on levels 2, 3, 4, 5, and 6, whereby all the quartz developed on Nos. 4 and 5 levels has been exhausted, the reserves of mill-rock in the mine being now confined to levels Nos. 3 and 6, and the new level recently opened from the Energetic shaft. The tonnage milled, 12,748 tons, yielded bullion to the value of £14,666 16s. 8d., or 5 dwt. 16 gr. per ton, while the concentrates and slimes shipped to the smelter realised £1,068 5s. 3d. At the cyanide-works, 8,710 tons, representing 69·8 per cent. of the total crushed, yielded bullion to the value of £5,941 5s. 1d. at a working-cost of 16s. 4·88d. per ton milled. This rate of cost includes mining, milling, and concentrating, cyaniding, assay offices, and bullion and general charges.

Energetic Mine.—Since sinking operations were completed to No 8 level the various underground works effected have been purely of a development character, the execution of which must have entailed very considerable expenditure. The reef system was opened on level No. 7 at 267 ft. from the shaft, and driving was extended north 45 ft. and south 698 ft. Whilst rising from the north drive to connect with a winze sunk from No 6 Wealth of Nations a serious accident occurred, which resulted in the deaths of three miners, who were suffocated by the effects of poisonous gases, presumably liberated from the stagnant water which had accumulated in the winze prior to connection being effected with the rock drill. On the whole, this level has proved a great disappointment, for not only did the quartz open out in very limited quantity, but the assay-values were of very low grade. Diamond drilling: There were four diamond-drill holes pierced from No. 7 level, hoping to locate and intersect a parallel ore-body. Of these, three were non-productive, while the other borehole located a thin band of stone, the value of which will shortly be proved. Shaft: During October a contract was let to sink the shaft to No. 8 level, a distance of 125 ft. This contract was finished in February of 1905, and driving commenced to open out at a depth of 1,502·5 ft. from the surface. Surface plant: The first direct-coupled Tangye winding-engine erected in the district started to hoist from the bottom of the shaft in March last, and has continued to run in a satisfactory manner. A small electric-light plant has been installed, which efficiently lights the surface works and the chambers at the different levels.

Golden Fleece.—Mining and milling have been continuous during the year, with the exception of the time required to thoroughly overhaul and retimber the winding-shaft between Nos. 10 and 11 levels. Further sinking has not been effected in the main shaft, but in levels Nos. 11, 12, and 13, extensive developments have been extended north, making in all 1,539·5 ft. of development-work.

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The stopes have continued to maintain their previous characteristics, thus proving the irregularities in the reef-formation, which tends to largely increase the cost of stoping. It is proposed to sink the main shaft from No. 13 to No. 14 a vertical distance of 125 ft., at an early date. During the year 12,930 tons of quartz was crushed, yielding bullion by amalgamation to the value of £21,040 17s. 6d., while the concentrates and slimes shipped to the smelter realised £1,940 3s. 7d. Cyanide: 8,610 tons of sands, representing 66·589 per cent. of the tonnage milled was cyanided, yielding bullion to the value of £3,011 7s. 5d., equal to a return of 6s. 11·941d. per ton treated. Compared with values of previous year the bullion shows a decrease of £798 9s. 2d. Temperature at noon in the shade, 65°, at No. 11, 53°, at No. 12, 65°, return airway, 70°.

Progress Mine.—The various works in connection with this property have been continuously carried on, and the developments so efficiently and energetically effected at levels Nos. 3, 4, 6, 8, 9, and 10 have resulted in opening out a large tonnage of quartz, of which a considerable percentage is of very low grade. The total footages driven, &c., comprise driving and crosscutting 3,442 ft., and rising and sinking 1,311 ft., at a cost of £7,030 10s. Stoping has been carried out on Nos. 4, 5, 8, 9, and 10 levels, the stopes calling for no special comment except the east stopes on Nos. 4 and 5, where, owing to an increased percentage of antimony, a larger portion of the quartz has had to be used for filling. During the latter half of the year the developments were watched with a great amount of interest on No. 10 level, as an ore-body was developed which at first sight appeared to be of considerable magnitude. This body of stone was driven on in all directions, and the stone on the level mined out, leaving an area 120 ft. long by an average of 20 ft. wide standing on timber. The quartz in this block contained only a small portion of ore having a good value; but taking the values throughout the average was very moderate. In rising from No. 10, stone was carried for about 70 ft., and evidently connection was completed to No. 9 on good reef-formation. Diamond drill: During eight months and a half the drill was steadily worked and valuable information was obtained, the combined borings amounting to 2,125·5 ft., but owing to the soft character of the ground in the vicinity of the reefs, difficulty was experienced in procuring reliable cores. The surface equipment at the mine has undergone no material alteration, and the machinery connected therewith continues to maintain its former standard of efficiency. At the battery the only alteration of importance was the erection of an additional 25-ft.-diameter treatment-tank, the plant now comprising fourteen tanks of equal diameter. During the year the sixty-five-stamp mill ran 303·73 days, leaving only 8·27 days lost time for the whole year, which includes all incidental stoppages, such as monthly clean-ups, daily scrapes, &c. The tonnage crushed exceeds that of any previous year by 2,794 tons. The 59,908 tons crushed yielded bullion by amalgamation to the value of £88,641 15s. 3d., equal to 7 dwt. 3·93 gr. per ton. 1,093 tons of concentrates was treated in the chlorination-works, yielding 2,750 oz. 14 dwt. 5 gr. of gold, valued at £11,020 7s. 7d. At the cyanide-works 31,735 tons of coarser sands was treated, yielding bullion to the value of £8,674 18s. 5d. The treatment-cost amounted to 2s. 1·77d. per ton, and the profit to 3s. 3·82d. per ton, making the yield equal to 5s. 5·6d. The pyritic slimes shipped to the smelter realised £2,034 1s. 7d. A general summary of the aggregate working-cost, yield, and resulting profit in milling 59,908 tons, and cyaniding 31,735 tons, for 1904, is as follows: Total working-cost (exclusive of capital and development expenditure) incurred in mining, transporting, milling and concentrating (including bullion charges and office and general expenses) £48,671 19s. 3d., or 16s. 2·987d. per ton milled; cyaniding, £3,408 10s., or 1s. 1·655d. per ton milled: totals £52,080 9s. 3d., or 17s. 4·642d. per ton milled. Profit on mining, transporting, milling and concentrating, and chlorinating (including bullion charges and office and general expenses) £53,024 5s. 2d., or 17s. 8·423d. per ton milled; cyaniding, £5,266 8s. 5d., or 1s. 9·098d. per ton milled: totals, £58,290 13s. 7d., or 19s. 5·521d. per ton milled. Summary: total working-cost, £52,080 9s. 3d., or 17s. 4·642d. per ton milled; profit, £58,290 13s. 7d., or 19s. 5·521d. per ton milled: yield, £110,371 2s. 10d., or £1 16s. 10·163d. per ton milled. A slightly lower-grade quartz has been milled during 1904 than previously, and this will probably again be the case in 1905, otherwise the management look forward to another successful year. With regard to the underground work, mine-development will be energetically pushed, also the main shaft will be sunk to another level.

Keep-it-Dark (owners: Keep-it-Dark Gold-mining Company (Limited); Edwin Bray, Manager).—The various works in connection with mining, milling, and cyanide extraction at the mine and battery have been steadily maintained at their usual standard of efficiency. Development-work is kept well ahead, the safety of men and property well attended to, and the plant generally is kept in good order. In addition to the ordinary work done the winding-shaft was sunk to a further depth of 300 ft., the cost (including the cutting and timbering of two suitable chambers) being £1,428 14s. 4d., which sum, when rated on the depth sunk, gives an average cost of £4 10s. per foot. Stone for milling was chiefly stoped from levels Nos. 4 and 5. The lode on the former level continued to maintain uniformity in width and quality, but more adverse conditions exist on No. 5, where the formation is somewhat irregular, the underlay being found to take a strong veer to the east when stoping had proceeded to 40 ft. in height. This disappointing change of formation is attributed to the irregular position of the lode intersected on No. 5 crosscut at 252 ft. from the main shaft. To effect connection for ventilation and the future development of No. 6 block, sinking was commenced and continued on the 252 ft. stone to a depth of 116 ft., when holing was successfully effected by rising from No. 6 crosscut at 382 ft. from the shaft. Shortly afterwards, the main lode was cut at 9 ft. in width, showing fair prospects of gold. The stone mined and milled—12,300 tons—yielded 3,641 oz. 15 dwt. 5 gr. from amalgamation: value, £14,756 16s. 2d., giving an average rate per ton of 5 dwt. 22 gr. The working-costs for mining and raising the tonnage milled, were £7,904 11s. 10d., or an average of 12s. 10d. per ton, while the cost of milling and other incidental expenses were £1,501 5s., or a fraction over 2s. 4d. per ton. The extraction by cyanide continues to show improved results as compared with those of the previous year, the yield of bullion being 1,873 oz. and 13 gr., valued at £5,911 13s. 7d. This gave an extraction value of a

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fraction over 9s. 7·25d. per gross ton milled; while the cost of treatment, including labour, all material used, royalty, &c., was £2,270 12s. 8d., or 3s. 8·25d. per ton, this being a profit of 3s. 10d. per ton on the milled tonnage. Two improved Wilfley concentrators were added to the battery plant. The results obtained for the five months worked gave a weekly average of 2 tons of concentrates, with an assay value of nearly 5 oz. per ton. Comparing the total values against the year 1903, an increase of £195 7s. 7d. is shown in favour of 1904, notwithstanding the ore milled shows a decrease of 268 tons. Temperature at brace 65°, at No. 3 chamber 60°, No. 6 chamber 65°, dead end 70°.

New Inkerman Mine (Norman Dudgeon, Attorney).—The operative works in connection with this property have made active progress, and the gross tonnage mined and delivered at the mill was 7,639 tons. Of this total, 6,500 tons was stoped on the 100 ft. level off the incline shaft, while the other 1,139 tons was stoped above the main level. The works throughout are kept in good order, timbering and ventilation being well maintained at the face. At the end of May the crushing-power was increased to twenty head of stamps, crushing 8,139 tons of quartz, together with 1,690 tons of old tailings, which yielded by amalgamation 1,854 oz. 3 dwt. 9 gr., valued at £7,678 4s. 2d.; also 5,882 tons of coarse sands were treated by cyanide, yielding 769 oz. 6 dwt. 22 gr., or bullion-value equal to £2,396 8s. 5d., and the concentrates smelted yielded bullion equal to £1,104 17s. 11d. The total working-costs, including development-work, capital expenditure, management, and office expenses, &c., were £1 1s. 1·04d. per ton. The cost of stoping, including delivery of ore at battery, was 8s. 6·496d. per ton. Milling, including repairs, coal, &c., 5s. 5·71d. per ton. Cyaniding, 2s. 4·252d. per ton cyanided. For the working of the ore-bodies known to exist in the property it is proposed to sink on the reef now being operated upon in the incline shaft to an approximate depth of 400 ft. below the adit, also to locate and explore the lode locally known as the "Big Blow." These important works are now under the consideration of the mine-owners, but at time of writing no definite advice as to their decision had come to hand.

The United Gold-mining Company is a reconstruction embracing the Golden Lead and the Industry proprietaries. Referring to the Industry Mine, the conditions mentioned in my report of last year relative to the disappointing and crushed character of the ground, have been fully borne out. The new company considered it advisable to suspend operations and withdraw all movable material.

New Scotia.—As mentioned in my report of last year, the hoisting-engine and boiler were removed from the old Drake shaft and re-erected to facilitate sinking on an outcrop from the Gallant rise level. Sinking was proceeded with on the underlay to a depth of 135 ft. and driving was extended on the reef north and south, but owing to heavy water to contend against and the low grade of the ore mined, operations were suspended. Practically speaking, the Merrijigs district is now a dead letter in the mining industry.

Victoria and Inglewood (owner, P. N. Kingswell).—Operations have been continuous, and the various works for the underground and surface developments are actively pushed to maintain efficiency; whilst the general working-arrangements are kept in good order and condition. Stoping was chiefly directed to No. 3 level and connection completed to No. 4, whereby ventilation is very efficiently provided. The battery and power plant have been thoroughly overhauled, and a well equipped and proportioned cyanide plant erected, suitable in every way to meet future requirements. The general aspect of the property augurs favourably towards a promising future for the owner. Temperature on surface at noon 56°, in the stopes 62°, return airway 60°.

Big River.—The various works in connection with this mine were actively carried on during the year, and the general equipment and working-conditions are well maintained, timbering and ventilation being very satisfactory. Stoping was continued on No. 7 level, and the stone milled—988 tons—yielded 902 oz. 6 dwt., valued at £3,653 7s. 6d. The winding-shaft was sunk, securely timbered, and laddered for a further section, making the total depth 1,000 ft. from adit, and from brace 1,200 ft. The chamber has been cut and crosscutting on No. 8 level is in active progress. Temperature on surface, 11 a.m., 70°; and at 1,000 ft. in depth, 70°.

Searchlight Syndicate.—This syndicate's property is situated about a mile south of the Big River battery. The party—two men—are prospecting along the line of outcrop, but the stone so far developed only shows thicknesses of 6 in. and 16 in.

St. George.—There is only one man working on a very small leader.

Last Chance.—In the early part of the year, Morris and Fleming developed a payable leader from the level of the Merrijigs Road, but eventually it nipped out. The party then suspended further exploration and withdrew all portable plant. A five-stamp mill and cyanide plant remain on the property.

Golden Lead.—Further driving on this prospecting-tunnel has been suspended, and Mr. McMasters (manager) is employed in surface prospecting.

Ulster Mine, Reefton.—This property, owned by a local company, is situated in the Painkiller district, and the ore-body now prospected is supposed to be the continuation of the old Welcome Lode. To procure reliable information relative to the true position of the lode at depth, prior to sinking a main shaft, driving, sinking, and rising have been actively carried out, but the auriferous values so far proved fail to give satisfactory promise towards warranting increased expenditure in sinking and battery construction.

Taffy.—This property has been shut down during the last year, but Mr. Neilson, of Blackball, informed the Assistant Inspector that he was hopeful of developing a payable lead, and would open the mine early.

Mount Paparoa Gold-mining Company (late Crœsus).—All operations are suspended. William Luke, caretaker, is in charge of the property.

Minerva.—All work suspended on this property, with no person in charge.

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Garden Gully Gold-mining Company (W. G. Mouat, Mine-manager).—Operations have been confined to driving north 75 ft., and south 75 ft. on the line of reef, and rising 15 ft. from level No. 1, to connect (and effect ventilation) with No. 2, the ventilation being now supplied by fan driven by water-power, which will be further assisted by water-blast. To increase the carrying-capacity of the tramway it is being reconstructed, and a wider rail-gauge adopted. The various works in connection with the erection of a battery are in active progress. These include the construction of water-races, hoppers, and other necessary works, but when the mine was inspected the company had not decided on the purchase of the battery plant.

Wilberforce.—This quartz-body was formerly reported on, and a company formed to develop it about twenty years ago. At that time samples to the extent of 4 tons were taken from the reef and treated, but the results obtained cannot now be given with any degree of certainty, there being no reliable information available respecting the true values. The stone, 60 ft. in length and 15 ft. in width, outcrops about 500 ft. from the cap of the range, and one mile northward from Browning's Pass, and, with the exception of securing samples, nothing has been done on this property for many years. A low-level tunnel had been driven westward to intersect the reef, but as it is now practically closed, ingress is quite impossible. If future developments prove the existence of this large ore-body to be continuous, water for motive power and other purposes can be easily obtained, as can also a suitable battery-site, but scarcity of timber for mining may be considered a serious hindrance. Road-construction is completed from Glentunnel Railway-station (on the Canterbury side of the main range) to within 5 chains of the proposed battery-site, and with an additional expenditure of £200, the 5-chain section could be made servicable for wheeled traffic.

General Remarks.

In comparing the bullion-values earned for the year under review against the year 1903, there is an increase of £18,714 7s. 8d. in favour of Reefton and Lyell, whilst the total increase earned over the whole inspection district was £13,599 4s. 7d. This fall of £5,115 3s. 1d. in the gross earnings of other portions of the district is chiefly due to depreciation of output from the Golden Ridge (Taitapu Estates), the Inglewood, Inkerman, Alpine Extended, and Big River being responsible for the increase in favour of Reefton.

Notwithstanding that the earnings from the Progress Mines are the highest yet recorded for any yearly period, the gross earnings from the whole system under the control of the Progress Mines and Consolidated Goldfields show a decrease of £805 15s. 8d. This decrease is attributed to suspension of operations at the Welcome Mine. Guided by the advanced state of the developments in progress, the general aspect of the mining-field compares favourably with former years, and continuance of profitable values and efficiency in operations are fairly assured.

HYDRAULIC AND ALLUVIAL MINING.

Mahakipawa.

King Solomon Syndicate.—The intermediate shaft has been sunk to the 86 ft. level, and connection completed with the Old King Solomon shaft workings, but owing to the excessive soakage percolating through the open strata underlying the creek-bed the 6 in. pumps were overpowered, and this necessitated suspension of operations on the 86 ft. level. However, in view of reducing the heavy inflow of water, the work of fluming the creek was commenced from the Hibernian shaft, and continued past the Intermediate. This work is now completed, but the work done has, so far, failed to unwater the deep levels. Meanwhile operations are confined to driving on a false bottom on the 40 ft. level, with the expectation of picking up the Hibernian lead. The workings are securely timbered, and in good order.

In the Mahakipawa Valley, Harris and party (three men) were successful in their last wash-up in obtaining three nuggets, 1 oz., 2·5 oz., and 3 oz. in weight respectively, but their good luck did not give wages.

Coady and party (two men) continue to work on the river-bed with varied results, while further up the creek Morton, Nelson, Coombes, and Rochfort are fossicking.

King and party (two men) continue to trench for reefs on the dividing-range, the results being confined to small leaders.

Wakamarina and Deep Creek.—Joseph Styx and party (four men) are carrying out a system of diving to clean out the deep holes in the creek-bed. When last visited, work was suspended awaiting slight repairs to the diving-dress, and one of the party informed the Assistant Inspector that at low water sufficient gold was won from the crevices to pay more than current wages.

Mr. Delamannte, caretaker at the Gorge Claim, is still hopeful that sufficient capital will yet be available to clean out the gorge.

Caines and party continue to prospect a branch of the Deep Creek, with satisfactory results. The gold gives a coarse sample.

Davis and party (four men) are now doing very well after a lengthened spell of rather indifferent success.

Charles Nelson and party (four men) are engaged bringing in a water-race from the All Nations, a distance of two miles, to sluice a district known as the Sydney Flat.

At the commencement of the year the creek was very low, and quite a number of miners were carrying out a system of clearing out the crevices. Some nice nuggets are picked up at times.

Onamalutu District.—Smith and party (five men) are bringing in a water-race to work some ground which they formerly opened about two years ago. The party are satisfied that with the prospects

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obtained in the first working, profitable results will be maintained with an efficient water-supply. This is the only mining party in the district.

Ericon Hydraulic Sluicing Company.—This property continues to be shut down.

Takaka.

Bu-Bu Hydraulic Sluicing Company (Charles Campbell, Manager).—The deep-level face is now exhausted southward, and operations have been opened and continued on a section of slightly rising ground to the north. The face shows a varied depth of wash, intermixed with large boulders, which latter tend to increase the labour in keeping the face clear. Pipe-line installation and other important works directly connected with the claim are carefully and efficiently maintained. The values won continue to maintain their former standard.

Upper Anatoki.—A subsidy of £13 has been approved, through the Takaka Miners' Association (at the rates prescribed by the regulations, Class 1, on the usual conditions as to reports on the work), to enable Messrs. Lloyd and McGrath to prospect for three months in the Upper Anatoki District.

Collingwood.

Parapara Hydraulic Sluicing Company (James Bassett, Manager).—During the year operations in the Glenmutchkin face were discontinued, and an extensive face opened and worked continuously at the Hit or Miss, all the available water being utilised for the purpose. The returns show very considerable promise. The company contemplate working their deep level freehold at West's Flat by elevating. Free drainage would necessitate very considerable expenditure in order to be effective over the deep areas, hence elevating will be resorted to. It is anticipated that the ground will yield very handsome returns.

Quartz Ranges (C. Y. Fell, Nelson).—This property was not visited.

Rocky River.—Nothing further has been done in this district since my last report.

Slate River Sluicing Company.—The various works recently effected to raise and strengthen the storage-dam having largely increased the conserving-capacity, sluicing operations are now more continuous, and the returns therefrom obtained show an increase of £464 10s. 4d., as compared with the previous year. Considering the efficiency of developments in water-storage and the facilities for getting rid of tailings, continuance of favourable returns may be fairly anticipated.

Westport.

On the German Creek and its tributaries mining shows no improvement, the only parties left to struggle for an existence being Milgate, Porter, and Jamieson, who are sluicing old tailings, which give very poor returns. Milgate's party had a considerable slip at their claim, which covered their boxes to a depth of 15 ft. Jamieson and Porter (who have worked in this locality for fifteen years) continue to drive occasionally on a thin bed of cement of poor value.

Cook Terrace, Fairdown.—Gardiner and party's subsidised tunnel has turned out a very lucrative concern, the party having sold gold during the year equal to £3 per week per man, and there is every evidence of its continuance. The ground is tunnelled in the vicinity of the Great Exploration Company's claim.

Fairdown.—Messrs. Young and McKay are driving a subsidised tunnel in Rochfort Terrace.

Christmas Terrace.—Charles Findlay and W. Crawford have lodged an application for a subsidy to drive a tunnel from 900 ft. to 1,200 ft.

Waimangaroa River.—A few resident parties continue to fossick and tunnel along the river-banks, with varying results. The gold won is a very nice coarse sample.

Golden Basin Prospecting Association have done nothing further to prove the deep leads at the base of the Rochfort Terrace.

Shamrock and Virgin Flat Properties are still standing.

Carmody and party (*Addison's*) continue to carry on their sluicing and elevating operations with lucrative results, although these have been somewhat reduced during the recent dry weather. Drainage-outlet and general equipment are kept in good order.

Neil and party (six men) are working their hydraulic sluicing and elevating claim, with satisfactory results. The property is very tidily worked, and the plant is kept in good order.

McCan and party: The intermittent water-supply is rather against this party, but, notwithstanding the shortage of water, the gold won has been satisfactory.

O'Toles and Swearer (six men): This sluicing and elevating party consider the wages earned are better than swagging or contracting under the co-operative system. The party share alike and work very agreeably.

Gould and party (six men): Scarcity of water on this sluicing and elevating claim is a factor much felt, as eight heads are required to work the ground with any degree of success.

Cement-working.

Halburg and party (three men) have recently opened a cement-face, 5 ft. in thickness, situated about 5 chains to the west of the Golden Sand property. The cement is conveyed on a horse tramline to the battery, which consists of four heads of stamps driven by a 20-ft.-diameter overshot water-wheel. So far they have not cleaned up.

Milligan and party (five men): The cement-bed worked on this claim is about 7 ft. in thickness, giving an average value of 4s. per yard, while the crushing-power consists of a ten-stamp mill driven by Pelton wheel.

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Charleston.

Charleston Beach Sluicing Company.—Operations have been somewhat irregular during the year. When the claim was recently inspected two men were employed on each shift. The sands operated on do not appear to be rich.

Powell's Sluicing and Elevating Claim.—Operations continue to be persistently and systematically carried on. The plant and other details of the property are kept in thorough working-condition. When recently visited there was no person on the claim, the party being engaged effecting repairs on the water-race.

Argyle Water-race is let to Walsh and party for a period of twelve months. Recently, the lower valve leading from the dam to Deep Creek was obstructed, but by the prompt action of the County Engineer in securing the services of a diving party the obstruction was removed. In order to effect a more efficient distribution of the water-supply, 15 chains of fluming are required, at a cost of £10 per chain, which cost is considered by the County Council to exceed their total revenue derived from the district or the rental received from the lessee. With the probable advantages to be gained on completion of the proposed work, it is considered the increased effectiveness of the water-supply would then be sufficient to give employment to an additional twenty miners.

Mining in the Charleston district seems to have experienced revival of late, both as regards sluicing and cement-crushing, thirty miners being actually employed. Morris and party have just completed a new hydraulic elevator, while Higgins and party have just completed the erection of a small battery for cement-crushing, and Walsh and party are opening out a sluicing claim on a branch of the Nile.

Murchison.

Maruia Sluicing Claim.—Since this property was opened for mining purposes dearth of water has been a decided drawback to developments. The ground being proved of a favourable character, the company are now considering the advisability of constructing a permanent water-supply at a calculated cost of £6,000. Meanwhile, sluicing operations are confined to a deposit of recent formation, located in a small gully. The gold won is fine, and is deposited chiefly on the sides and bottom.

Morris Brothers continue to sluice further down the Matakitaki River with success.

Thomson and party (three men) have made satisfactory progress towards the construction of their new water-race, a length of a mile and a half being completed. The total completed length will be three miles. During the recent heavy rainfall the party had a very nice wash-up.

Six-mile Hydraulic Sluicing Company (Matakitaki River. T. Maine, Manager).—The gravels operated on yield profitable results, but the intermittent water-supply (practically supported by rainfall) is the chief drawback. Three men employed. The various works are in good order.

Horse Terrace Sluicing Company (C. Belby, Manager).—Prior to this company acquiring possession, the ground was formerly worked by small parties, who, being unable to raise sufficient capital to effect profitable development, willingly sold out, although they were confident that high auriferous values existed in the property. During the limited period (six months) during which the company has been actively engaged, 230 chains of water-race have been constructed to a width of 6 ft. by 4 ft. in depth, with a supply-capacity of 35 heads of water. Connecting with the race is a 22-in.-pipe line, laid for a length of 800 ft., and junctioned with two main branch lines of 350 ft., while each branch is fitted with 7 in. delivery Giant nozzles. It is further contemplated, in view of running the works continuously night and day, to instal electric light over the whole system. Timber is also sawn by the company's own plant, thus effecting considerable saving in the various developments.

Hunt's Freehold, recently purchased by a Wellington syndicate, has been prospected with such satisfactory results that detailed surveys were made and rights acquired for water-race construction on a large scale.

A Wellington company has employed Evan Brothers to prospect a section of auriferous ground located in the central Buller, prior to permanent works being undertaken.

New Lyell Sluicing Company (Thornhill Cooper, Mine-manager).—Since this company acquired possession of this property (formerly owned and worked under the title of the Lyell Hydraulic Sluicing Company), operations have been confined to the construction of a high-level water-race, and extending preparatory works to open a new face at a lower level of the river, so as to enable sluicing to be commenced from the lowest level of the ground, and at the same time admit of a tail-race with sufficient fall to carry away tailings from the sluicing of the gravels on the higher levels without hindrance to future operations.

New Creek Syndicate.—Work has been confined to the operations of one man, who was employed in carrying out a system of surface trenching with a view to picking up the quartz outcrop which shed the rich stone now found on the surface The results have been so far unfruitful.

Newton River Sluicing Company.—This company having expended £6,000 in water-race and tail-race construction, general equipment, and electric-light installation, a lucrative and well-ordered property has been established. In order to concentrate operations the main road was deviated for a distance of 23 chains, and the grades are much reduced as compared with those on the old road.

Boatman's.

Apart from the dredging industry, alluvial mining is confined to a few old pensioners, who do a little fossicking at their leisure,

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Grey Valley.

Blackwater.—Mining conditions are practically unchanged in this district. Blackwater dredge has obtained fair returns, while the Greymouth Lagoons dredge changed ownership, the purchasers being an Ikamatua syndicate Flaherty's subsidised tunnel has been driven the authorised distance, with unfavourable results. Alluvial mining is confined to about thirty Europeans and an equal number of Chinese. Craighead's subsidised tunnel (four men) has proved a profitable concern.

Ahaura.—This practically exhausted district continues to find employment for about twenty Europeans and ten Chinese. The number of Chinese has gradually diminished.

Red Jack's and *Kangaroo Creeks* furnish employment to about an equal number with the Ahaura—viz., twenty Europeans and ten Chinese.

Moonlight.—The fame of this once-noted mining district has dwindled down; only about ten parties of two men each are now engaged in the locality.

Shrives and party have opened fresh ground in the locality of the Montgomery Terrace claim, but the water-supply is wholly dependent on the rainfall.

Republic Sluicing Company.—The various works in connection with the water-races and plant are in good order, and the returns have shown a decided improvement during the year.

Montgomery Terrace.—Operations have been considerably affected by heavy landslips along the line of the water-race, and these have tended to retard profitable employment. The steep and broken hillside along the Blackball Creek is a constant source of trouble, otherwise the ground is considered of fair value.

Hillier and party (four men), and Hyndman (four men), who draw their water-supplies from the Republic subsidised water-race are making a living wage. The sluicing-country continues to keep very rough, large boulders being considerably in evidence.

No Town.—Since dredging was commenced in this locality, alluvial mining has been confined to about ten Europeans and seven Chinese.

Nelson Creek.—In this old alluvial district mining is now almost confined to the dredging industry.

Kumara.

According to the Assistant Inspector's reports, the sludge-channels, deep levels, dams, and other operative works have been duly inspected and found in good working-order, also the general equipment, pipe-lines, &c., were found in a satisfactory state of efficiency.

Kelly's Terrace Drainage-tunnel.—During the year extensive repairs have been effected from the incline shaft and past the Nos. 1 and 2 vertical shafts, including general repairs to the shafts and ladder-ways. The works recommended are now completed, and the channel is in an efficient state of repair. There are no sluicing parties at present taking advantage of this drainage-channel.

Wheel of Fortune Hydraulic Sluicing Company (Thomas Hahon, Manager).—This new syndicate (local) having purchased the plant and mining privileges in connection with the property, are working continuously with fifteen men, but shortage of water-supplies is a serious drawback. Electric light is suitably installed over the whole works and plant, and other conditions about the claim are kept in an efficient state.

Beroz and Mills (five men): This subsidised party having completed their tunnel, opened out on a line of wash which at first only gave poor results, but soon improved, and now yields very profitable returns. The ground is well timbered, and rising is commenced to provide ventilation.

Johansen and Case are blocking out, but the results are not encouraging.

Holtz and party (two men) are also blocking out, with unfavourable results.

Ryan and Son (two men) are continuing to block out the wash, with unfavourable results.

Warne and party (two men) have completed repairs to their tunnel, and are now driving ahead.

Callaghan's District.—Manzoni and party (four men), Hunt and party (three men), Darby and Hunt (two men), Rochitti and party (two men), Bassi and party (two men), Burnerson and party (two men): Manzoni and Hunt are supplied with night water from the Government water-races; the others are entirely dependent on the rainfall for water to work their claims.

Minerals Gold-mining Company.—The various works effected have been chiefly confined to development, and include the sinking of a main shaft (10 ft. 4 in. by 4 ft., divided into three compartments), the renewal of six miles of water-race to carry 4 heads of water, and the erection of a water-balance for winding purposes. A prospecting-tunnel was driven in view of picking up a lead of washdirt which does not exceed 1 ft. 6 in. in thickness, but according to the pan prospects it is considered payable. The works and plant are in good order, and mining is proceeding satisfactorily.

Hokitika.

Humphrey's Gully (Mr. Greenbank, Manager).—Sluicing operations continue to be carried out on a large scale by a party of tributers, while the earnings won give satisfactory promise to both parties concerned. Developments have not been further extended during the year. Water-races and all working plant are efficiently maintained.

Craig's Freehold.—Operations are still continued on tribute by three separate responsible parties, whose term expired on the 31st October last. Irvine and party of six men having nearly exhausted their section will have a considerable amount of prospecting to undertake should fresh arrangements

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be completed, also Chessman's party are closing their section, while Goudy and party have prospected during the past four months without any yield. The results from this property show a serious decline, and the owners are not sanguine enough to advance further capital towards prospecting.

McQuilkin and party on driving their subsidised tunnel 200 ft. struck payable wash, which they are now working by underground mining, but scarcity of water is much felt on the high terrace land where a permanent water-supply is not easily available.

R. A. Harcourt's drainage-tunnel has been completed at a driven distance of 666 ft.

Back Creek.—With the exception of a sample of 275 yards, which yielded 3·5 dwt. per yard, Cooper and party have done no work of any importance to prove the values of the Brighton wash. The work done by this party consists of driving and crosscutting 48 ft., and putting up a rise 12 ft., from which they have driven 40 ft. on an average wash of 4 ft. thick. The lead would seem to run north-west and south-east, but it is not yet determined how far it runs into the terrace.

Ryan, Knight, and Spence, having sunk a shaft to a depth of 8 ft. and driven 36 ft., were so satisfied with the results that they determined to drive a low level.

Hartridgen and party (three men) had one washing of 18 dwt. from 17 yards of washdirt (which they consider encouraging), and have started to drive a low level, which is now within 40 ft. of the wash.

Brook and party (two men) have struck the wash 4 ft. in thickness, showing fair prospects, but they will not be in a position to commence washing until a paddock and other requisites are completed.

Stewart Johnston and party's (six men) subsidised tunnel is yielding very satisfactory returns. The workings being fairly extensive are kept in good order, and well ventilated.

Seddon's Terrace.—Cooper and Harris obtain very good results. The property is well kept.

Knight and Spence: The wash shows decided improvement, affording an increase in values.

Ross.

Mont d'Or (John McKay, Mine-manager).—Operations have been actively maintained, and the gold won amounted to 1,019 oz. 13 dwt. The washdirt treated was of poor quality generally, the best layers being too deep for the operative tail-race. Plant and general equipment are in good working-order.

United Ross.—The Mont d'Or Company lately acquired possession, but further work in the deep level and elevating claim has been abandoned, and the plant partly withdrawn. A tribute party who sluice the terrace part of the claim are sometimes fortunate in striking some very rich patches of coarse gold which lies chiefly in pockets.

McCloud Terrace Sluicing Company (Fergus McCloud, Mine-manager).—This company has sixty men employed in connection with the various branches of water-race and dam-construction, also pipe-laying. The developments being now in an advanced state of completion, sluicing is expected to commence at an early date. The tail-races and other preliminary works are completed.

Donnelly's Creek.—Smith and party having completed their subsidised water-race and dam are now in possession of a fair water-supply, and although returns are not of a lucrative nature hope is entertained that values will improve as the face is extended into the terrace.

Waiho.

The Waiho Sluicing Company has applied for protection.

The re-erection of the late Leviathan Freehold dredge on the Five-mile Beach has been suspended.

Mr. Earnshaw has applied for further protection of his dredge and mining privilege at Gillespie's Beach.

The dredge at Saltwater Beach is standing, so that mining matters in the Waiho district are not encouraging.

DREDGING.

Concerning the gold-dredging industry on the West Coast the most notable feature connected therewith is the gradual decline in the values won, also the corresponding decrease in the number of dredges now in operation. This depreciation may be largely attributed to the recklessness which characterized the boom of some four years ago, companies commencing operations in some instances without first making proper efforts to obtain definite knowledge as to the probable values of the auriferous deposits, and the local and natural conditions of the ground to be operated on. The prevailing rule was to get a dredge on the claim, notwithstanding the resultant consequences. The influence of the dredge-building engineer did not assist to abate the existing evil, for, in view of making the most of a favourable opportunity for business, dredges were constructed without, in many instances, being designed to suit the ground. Consulting engineers did not, as a rule, have time given them to correctly ascertain the conditions under which the machines were to operate, so great was the anxiety of companies to get dredges on the claims; hence the ruinous breakdowns in machinery and the excessive delays in subsequent operations. Deficiency in strength of engine-power, together with limited gold-saving space, have been the chief disadvantages experienced on the West Coast dredges, while the estimated productiveness was based too much on the lifting-capacity, and the treatment of the sands for the recovery of gold not sufficiently considered. Reviewing the whole position, revival of the industry must await the future.

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Working Dredges Inspected.

Name and Situation of Dredge.	Owners.	Dredgemasters.	Remarks.	Date of Inspection.
Marlborough.				
Alpine	Alpine Gold-dredging Co. (Ltd.)	...	Standing. Being removed to the Armchair Creek.	
Golden Point	Wakamarina Golden Point Gold-dredging Co. (Ltd.)	Robert Murray ...	In liquidation.	
Wangapeka	Wangapeka Gold-dredging Co. (Ltd.)	...	In liquidation	26/8/04
Buller River and Tributaries.				
Old Diggings	Hansen and party	A. Gillstrom ...	Rules well observed	16/6/04
Rocklands Beach ...	Rocklands Beach Gold-dredging Co. (Ltd.) ...	A. G. Skilton ...	Repairs to decking and boat-hooks required	16/6/04
Premier Dredge ...	Premier Buller Gold-dredging Co. (Ltd.), (Hans Hansen and Matthew Dellavedova)	Hans Hansen . .	Sold to Hans Hansen and Matthew Dellavedova during the year. Not working.	
Buller Junction ...	Buller Junction Gold-dredging Co. (Ltd.) ...	Smith Smeaton ...	In liquidation.	
Mokoia	Mokoia Gold-dredging Co. (Ltd.)	John R. Dalton ...	Boat-hooks and life-lines wanted	14/11/04
Feddersen	New Feddersen Gold-dredging Co. (Ltd.) ...	William Mollison	Boat-hooks and life-buoys wanted	14/6/04
Belle Vue (late Hokitika River)	Belle Vue Gold-dredging Co. (Ltd.)	C. G. Morel ...	Second boat wanted, and also covering to pinions and shafting of the elevators	8/6/04
Fern Flat (late Good Hope Company)	R. Liddicoat	R. Liddicoat ...	Was undergoing general overhaul	10/6/04
Amikitia	Amikitia Gold-dredging Co. (Ltd.)	T. Warne ...	Standing	8/6/04
Kohikohi	Kohikohi Gold-dredging Co. (Ltd.)	T. Warne ..	Light-lines and gangway require attention	8/6/04
A1 Dredge	A1 Gold-dredging Co. (Ltd.)	Alfred Thomson ...	Pontoons being renewed	12/4/04
Reeves's Proprietary ...	Reeves's Proprietary Gold-dredging Co. (Ltd.) ...	Robert Scott ...	Rules well complied with	12/4/04
Boatman's Creek ...	Boatman's Creek Gold-dredging Co. (Ltd.) ...	W. G. Mouat.		
Welcome	Welcome Gold-dredging Co. (Ltd.)	...	In liquidation	17/6/04
Grey River and Tributaries.				
Blackwater	Blackwater River Gold-dredging Co. (Ltd.) ...	Marston C. Cuff ...	Working regulations well complied with	23/11/04
Mawhera	Mawhera Gold-dredging Co. (Ltd.)	George Lee (at time of closing down)	In liquidation since 25th May, 1904	26/5/04
Lagoon (Ikamatua) ...	Ikamatua Gold-dredging Co. (Ltd.)	A. Crumpton ...	New dredge being erected	23/11/04
Trafalgar	New Trafalgar Gold-dredging Co. (Ltd.) ...	...	This dredge is under removal	23/11/04
Nelson Creek	Nelson Creek Gold-dredging Co. (Ltd.)	A. R. Edmonds ...	Working-conditions satisfactory	23/11/04
Pactolus, Nos. 1 and 2 ...	Pactolus Gold-dredging Co. (Ltd.)	James Cowan ...	No. 1. Hand-rails to elevator wanted. No. 2. Working satisfactory	23/11/04
Aldinga	Aldinga Gold-dredging Co. (Ltd.)	Thomas Coleman	Rules well complied with	23/11/04
Callaghan's Creek ...	Callaghan's Creek Gold-dredging Co. (Ltd.) ...	David Clark ...	Working-conditions fully equipped	24/11/04
Red Jack's	New Red Jack's Gold-dredging Co. (Ltd.) ...	...	In liquidation	19/11/04

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WORKING DREDGES INSPECTED—*continued.*

Name and Situation of Dredge.	Owners.	Dredgemasters.	Remarks.	Date of Inspection.
Grey River and Tributaries—continued.				
Bignell's No Town	Bignell's No Town Gold-dredging Co. (Ltd.) ...	William Wylie.		
North Beach	North Beach Gold-dredging Co. (Ltd.)	James Gilroy ...	Rail wanted on the gangway to shore	1/7/04
Mosquito	Mosquito Gold-dredging Co. (Ltd.)	C. D. Morpeth.		
Mosquito No. 2 ...	Mosquito No. 2 Gold-dredging Co. (Ltd.) ...	...	This dredge has ceased operations.	
No Town Creek ...	No Town Creek Gold-dredging Co. (Ltd.) ...	A. Cowan.		
Jamieson's Reward ...	Jamieson's Reward Gold-dredging Co. (Ltd.) ...	J. Dalziell ...	Hand-rail wanted on gangway leading to the gear-wheels	24/11/04
Sullivan's Lead ...	Sullivan's Lead Gold-dredging Co. (Ltd.) ...	...	Dredge sold and company wound up	19/11/04
Totara Flat	Totara Flat Gold-dredging Co. (Ltd.)	Gilbert Cunningham.		
Daylight	Daylight Gold-dredging Co. (Ltd.)	...	Never worked.	
Westland Rivers and Tributaries.				
Maori King	Marshall, Maunder, Black, and Keane	J. W. Maunder ...	Hand-rails wanted on gangway ashore and to the elevator	26/9/04
Cornwall	Cornwall Gold-dredging Co. (Ltd.)	Walter Stoneham	Life-buoy and light-line wanted	26/10/04
Stony and Mosquito Leads	Stony and Mosquito Leads Gold Dredging and Mining Co. (Ltd.)	Patrick Ellison ...	The working-conditions are in good order	1/7/04
		James Bennet ...	Hand-rail on gangway leading to elevator wanted ...	9/9/04
Greenstone Junction ...	Greenstone Junction Gold-dredging Co. (Ltd.) ...			
Greenstone Three-mile ...	Three-mile Greenstone Gold-dredging Co. (Ltd.) ...	J. G. Donaldson ...	General working is satisfactory	9/9/04
Greenstone Creek ...	Greenstone Creek Gold-dredging Co. (Ltd.) ...	A. Cowie ...	Life-buoy and light-line wanted on bow of dredge ...	9/9/04
Stafford-Waimea ...	Stafford-Waimea Gold-dredging Co. (Ltd.) ...	C. E. Richards ...	Covering of elevator-shaft wanted. 18/11/04. Standing. Company to be wound up	21/3/04
New Woodstock ...	New Woodstock Gold-dredging Co. (Ltd.) ...	J. M. McLean ...	Owners notified *re* decayed condition of pontoons ...	29/11/04
New Commissioners Flat	New Commissioners Flat Gold-dredging Co. (Ltd.)	B. Nayler.		
Prince of Wales ...	Prince of Wales Gold-dredging Co. (Ltd.) ...	William Robertson	Rules well complied with. Worked by six tributers ...	13/10/04
Kohinoor	Kohinoor Gold-dredging Co. (Ltd.)	...	In liquidation	13/10/04
Wanganui-Wataroa ...	Wanganui-Wataroa Gold-dredging Co. (Ltd.) ...	...	In liquidation.	
Day Dawn	New Day Dawn Gold-dredging Co. (Ltd.) ...	...	In liquidation	13/10/04
Five-mile Beach ...	Five-mile Beach Gold-dredging Co. (Ltd.) ...	...	Company has not yet started operations. Former Leviathan Freehold	1/7/04
Karamea (Golden Link)	Slate River Gold-dredging Co. (Ltd.)	H. A. Bishop ...	Working conditions in good order	30/7/04
Lake Mahinapua Scoop Dredge	Ewen McGregor and Georgeson	T. R. Sneddon ...	Engine haulage-rope to be covered, and gangway railed along water-race	11/10/04
Cronadon Dredge (Buller)	Cronadon Dredging Co. (Ltd.)	W. G. Mouat ...	Machinery undergoing a thorough overhaul	12/4/04
Montezuma (Hokitika) ...	Riely and party (six men)	W. Duncan ...	Worked on tribute. Recently changed hands... ...	8/10/04
Nelson Creek No. 2 (Grey)	Nelson Creek Gold-dredging Co. (Ltd.)	A. R. Edmonds ...	Under construction	23/11/04
Slab Hut (late Kangaroo), (Grey)	Slab Hut Gold-dredging Co. (Ltd.)	Charles Curtis ...	Erecting machinery	19/11/04

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MINERALS OTHER THAN GOLD.

Copper-mines, Nelson.—Mr. Turnbull, manager, kindly supplied the following information: The company having effected a persistent and general style of prospecting of ore-bodies on this property, have decided to concentrate future expenditure on the United Section, where they have cut three chutes of ore. The "Monster," although firstly considered a doubtful and irregular formation, has been ultimately intersected and proved to be a well-defined lode of low grade. The Champion Mine will not be worked in the meantime. Plans and reports have been prepared for Mr. Wood (chairman), who intends to leave for the Home-country in April, and during his absence £1,500 will be expended to effect further development, and if satisfactory results are obtained a larger company will be floated.

Mr. Turnbull and others have applied for 1,000 acres of copper-bearing country at D'Urville Island. Samples of the ore obtained and assayed gave 17 per cent. Cu. Mr. Turnbull intends to closely examine this property shortly, and if the ground is approved a Sydney syndicate will provide the necessary capital.

Hidden Treasure, Takaka.—Comment on the working of this property, either from commercial or scientific standpoints, would be practically useless. To all appearance the works are shut down definitely. Inquiries were made relative to infringement of section 193, "The Mining Act, 1898."

Washbourne Brothers' Hæmatite-paint Works fail to show their former activity.

PROSECUTIONS.

23rd June, 1904.—Warden's Court, Reefton: The New Inkerman Mines pleaded guilty to breach of "The Sunday Labour in Mines Prevention Act, 1897." Fined £2 and costs.

14th October, 1904.—At the instance of the Inspector of Mines proceedings were instituted against the Consolidated Goldfields of New Zealand (Limited) under section 211, Mining Act, relative to housing the slime-tables at the Golden Fleece Mine. The Court (Arbitration) having visited the plant and heard the evidence of the battery-manager and other employees considered the housing complained of was not necessary, and that the Act did not provide for such.

ACCIDENTS AND FATALITIES.

QUARTZ-MINES.

I regret to record the sad fatality which occurred at the Energetic Mine on the 14th March, 1904, whereby three miners were suffocated by gas liberated from poisonous water whilst rising to hole a winze. As this matter was fully dealt with at time of accident, further comment may be deemed unnecessary.

Date	Name.	Name of Mine.	Cause.
March 14, 1904	George Eslick ..	Energetic	Suffocated by gas liberated from poisoned water whilst rising to hole a winze.
" 14, 1904	Thomas Lindsay ..	"	
" 14, 1904	William Kennard ..	"	

Progress Mine.—14/1/04: Robert Haste, miner, sustained fracture of arm and leg by fall of quartz in the face.

New Inkerman Mine.—3/3/04: Walter Mattock, miner, sustained fracture of both thighs by fall of quartz in the face.

Progress Mines Cyanide-works.—11/7/04: Aubrey Gow had his arm broken in belting.

Golden Ridge, Taitapu.—4/10/04: E. McNamara, miner, sustained injury to the eye by an explosion of gelignite while charging a shot-hole. No after effects.

DREDGES.

Mokoia, Buller.—8/6/04: J. Dalton, dredgemaster, had both ankles dislocated while uncoiling a rope.

A 1, Reedman's Creek.—2/4/04: Fred Cullman, engine-driver, was severely bruised while oiling the machinery in motion.

Old Diggings, Buller.—3/6/04: Albert Gillstrom, master, had arm sprained in belting.

There were no fatal or really serious dredging accidents during the year.

I have, &c.,
R. TENNENT,
Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

MR. E. R. GREEN, Inspector of Mines, Dunedin, to the UNDER-SECRETARY FOR MINES, Wellington.

SIR,— Office of Inspector of Mines (Southern District), Dunedin, 8th April, 1905.

I have the honour to forward the accompanying reports on quartz-mines, hydraulic sluicing, and alluvial mines, and gold-dredges in the Otago and Southland Districts for the year ending the 31st December, 1904.

QUARTZ-MINING.

CANTERBURY.

Wilberforce Reefs.—The Wilberforce quartz reefs are situated at a high altitude at the head of the Wilberforce River, on the Canterbury side of the range of mountains dividing the Provinces of Canterbury and Westland. It is understood that a few tons of quartz had been taken out of a low-level

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tunnel, which had been driven westward to intersect the reef some twenty years ago, but, as the tunnel is now practically closed, ingress is impossible. The outcrop of quartz is seen to be 60 ft. in length by 15 ft. in width, about 500 ft. from the cap of the range, one mile northward from Browning's Pass. Should future development prove the existence of this large outcrop to be continuous and of a payable character, water for motive power and other purposes could be easily obtained, also a suitable battery-site, but there is a scarcity of timber for mining purposes. A road has been formed from the Glen-tunnel Railway-station to within 5 chains of the proposed battery-site, and the road could be made serviceable for wheeled traffic by an expenditure of £200.

Messrs. Hyndman and Cameron, prospectors, during 1903 took out a parcel of 9 cwt. of quartz, which, on being crushed at the A1 Battery at Reefton, yielded at the rate of 2 oz. of gold to the ton of stone. Owing to the severity of the winter weather and the difficulty of obtaining supplies, work was suspended during the winter. A number of claims having been taken up, several parties from the West Coast set out in the spring of 1904 with the object of thoroughly prospecting the reef.

Wilson's Reward or Prospector's Claim (100 acres): Four men are employed driving a tunnel, which has been driven 180 ft. and is expected to cut the reef at another 50 ft.

James Billett's Lease, south of Wilson's: One man employed in testing the outcrop, which has been proved satisfactory.

H. Baucke and partner are prospecting on their mining privilege with favourable results.

James Morris and Fleming are prospecting a 200-acre mining privilege also with favourable results.

There are, in all, about 800 acres pegged out to the southward of Wilson's Reward, and 300 acres to the northward, on which latter there is no one working at present. Altogether, there were thirteen men on the field.

Mr. James Martin, Mine-manager for Progress Gold-mining Company, Reefton, with three others, spent three days on the ground, and was well satisfied. Mr. Martin gave his opinion that all that was necessary to make the field a success would be brains and capital.

I am indebted to the Assistant Inspector of Mines, West Coast District, for the above information.

Albury, South Canterbury.

Chamberlain Settlement, Opawa.—Gold-bearing quartz reported by Mr. Nicholson, a farmer, on examination proved to be nothing more than pyrites in the joints of the slate rocks of the district.

Several assays have been made which prove that while there was no gold in the rock itself, still, the pyrites carry a small percentage of gold to the value of about 1s. 3d. per ton of stone. Assay—8 gr. of gold to the ton of stone with pyrites.

OTAGO.

Shotover.

Mount Aurum Gold-mining Company, Bullendale (F. T. Ware, Mine-manager).—25/11/04: The Achilles Gold-mines were purchased in 1903 by Messrs. Robert Lee and party, and prospecting operations were commenced in the early part of the year 1904. On the British-American line of reef two drives, from which Rodgers and Southbridge stoped a good block of stone some years ago, have been reopened and are being pushed ahead on the hanging-wall. As good results are expected from this section of the property, an aerial tramway is to be constructed to convey the quartz to the battery in Skipper's Creek. Other prospecting-work has been carried out, but no stone of a permanent nature met with. The battery is being overhauled and 10 head of stampers put in repair; motive power is to be supplied by Pelton wheel instead of electricity as in the past. The property is to receive thorough trial. Eleven men are employed in and about the mine and battery. At the end of the year the battery having been overhauled and 10 head of stampers put in good working-order, a start was made to crush stone from the prospecting-drives.

Shotover Quartz-mining Company, Skipper's (T. O. Bishop, Mine-manager).—25/11/04: The late manager, Mr. F. T. Ware, having taken charge of the Mount Aurum Gold-mining Company's property at Bullendale, Mr. Bishop has been appointed to the management of the Shotover Mine. Stoping is being continued in the rise section of the mine, and the uprise heading is also being continued to meet the upper level in the old workings for the purposes of ventilation. A winze has been sunk 50 ft. below the adit level, and a block of quartz has been stoped out. As the future of the mine depends upon its further development, the adit level, which has been stationary for some considerable time, should be advanced. The mine-workings are in good order. Timber is well used in the level and in the stopes. The explosives are kept in a suitable locked magazine and are well handled. The ventilating-fan supplies fresh air, which is conveyed to the working-faces in pipes. All the tailings are being saved with a view to future treatment by cyanide. A few tons of quartz were taken from Cleave's Reef on the eastern bank of the Shotover River and crushed in the company's battery, but the results obtained did not warrant further attention being given to that line of reef. Fifteen men were employed on this date in and about the mine and battery.

Aspinall's Reef, Packer's Point, Skipper's.—26/11/04: Nothing has been done on this reef throughout the year.

Crystal Reef, Skipper's.—26/11/04: Operations have been at a standstill during the year.

Reefton United Quartz-mining Company, Skipper's Point.—26/11/04: Since the completion of the prospecting undertaken by this company, mining operations have been at a standstill in connection with this reef. Satisfactory results, both as to quantity and quality of the stone, are said to have been obtained. Latest information from Reefton is to the effect that the company will take the necessary steps to erect a suitable battery at an early date and further develop the mine. Since my visit, I learn that the license has been cancelled and a new party have taken over the mine and intend to proceed with further development.

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William Keating's Prospecting Claim, Upper Shotover.—26/11/04: At the time of my visit a shaft had been sunk to a depth of 12 ft. on the side of the Sandhills Track, where it crosses the Blue Slip. Nothing of a permanent or profitable nature has been accomplished.

Alpine Reef, Skipper's Point (Owners, W. L. Davies and J. Henderson).—An area of 20 acres is held by this party, but no work has been done on the property throughout the year. As is the case with other known gold-bearing reefs in the Skipper's District, want of capital hinders the immediate development of this reef.

Glenorchy.

A Greymouth syndicate sent out two prospectors—A. Macinroe and J. McKay—for a few months to prospect a reef at Mopoke Creek, Lake Wakatipu. Assays of the quartz did not come up to expectations, and the prospectors returned to Greymouth.

George Reid, Queenstown, holds a prospecting-license over a large area in Caples Valley, Greenstone, Wakatipu District, over which prospecting operations are to be carried out.

Macetown.

Premier Sunrise (New Zealand) Gold-mining Company, Macetown (William Patton, Mine-manager).—9/11/04: On this date operations at the mine were not very brisk and work was confined to driving the incline tunnel ahead and to stoping in the rise section. The mine was in good order generally while natural ventilation, assisted by the water blast, provided a suitable current of air in the working-faces. Timber was well used throughout the mine. The payable chute of stone has cut out in the dip, and the main dip is being pushed ahead in an effort to pick it up again. Privy accommodation for the men has been provided in a stope in the return airway. The manager, Mr. William Patton, reports as follows on the work done for the half-year ending the 31st December, 1904: "Work in the mine has been carried on continuously during the half-year, the average number of men employed in the mine during that time was 11·5, including miners' electrician and truckers. The operations consisted of extending the incline, mining, prospecting, and repairing. Incline: During the half-year the incline has been driven 66 ft., at a cost of £3 4s. 3d. per foot; the nature of the country passed through was mostly of a hard class, and was consequently expensive driving. The formation consisted of hard slate and a small vein of pug, which continues to follow the hanging-wall. There is no quartz of any kind in the face, we had an increase of water here lately, which has tended to delay the work to a certain extent. Mining: I regret to say that mining has only been carried on during the months of July, August, and September, between passes 35 and 37, where the reef gave out. There has been a great falling-off in the quality of the ore for at least six months previous to the reef cutting out, and the absence of pyrites and other minerals usually found in the stone was very noticeable. The reef was cut out by a fault which occurred in the formation, in the shape of a hard wall, which almost crossed the reef-line and cut out the reef. There has evidently been a great disturbance in the country here, as part of the vein was sometimes found to be underlying the wrong way between 35 and 37 passes. I hope the reef will soon be discovered, as the work of prospecting is very expensive owing to the class of country we have got to deal with. Prospecting: A considerable amount of prospecting-work has been carried out at 37 and 38 passes, and now at 39 pass. The No. 37 rise was carried up to a height (from the floor of the incline) of 62 ft.; there was also a considerable amount of crosscutting carried out—principally into the foot-wall. A vein of stone was discovered which at first looked very promising, it being over 2 ft. in width and of good appearance, but only very poor prospects could be obtained. We therefore decided to discontinue for the present, the stone not being payable. No. 38 pass: Being of opinion that the reef might have taken a jump down here, we thought it advisable to drive a crosscut into the foot-wall on the incline level. A distance of 32 ft. was reached; the reef formation was passed through, but no favourable indications being met with we decided to push on the incline and as soon as possible start No. 39 rise. No. 39 rise: This rise has now been carried up to a height above the floor of the incline of 17 ft., at which point a crosscut has been started for the purpose of again driving through the line of reef. This work we are now pushing ahead as fast as possible; a distance of about 15 ft. will require to be driven before the line of reef is reached, and will take at least two or three weeks to complete. I have hopes that we may discover the reef here, as we are now over 90 ft. ahead of where the reef cut out, and at least 150 ft. past where the payable gold gave out. Prospecting at No. 15 pass: A large amount of prospecting-work was carried out here; the gold-bearing tract of country was discovered, and the veins of stone met with were of fair quality in places, but not well defined, and on being driven on, cut out. Work was continued here until we were convinced that nothing payable was likely to be discovered, thus proving that the blank which occurred in the reef here was from 160 ft. to 200 ft. in length. Repairing incline: The incline has given us a considerable amount of trouble during the last six months, owing to the old timbers in places having become very much decayed and giving way. Consequently they had to be renewed. Only the most pressing work is being carried out just now, owing to the great expense attending it. We have got such a great extent of old tunneling to keep open that we find it very troublesome to attend to. If we were on payable stone, however, we would not notice it so much. I trust, however, that before long ore of a payable character will be discovered, and the mine will be in a paying position. The great depth to which the mine has reached is, of course, very much against us, as the stone will require to be of good quality to pay. Milling: During the half-year 358 tons of quartz has been crushed and 130 oz. of smelted gold has been obtained, valued at £520 (approximate). Owing to no ore being obtained from the mine, the mill was not worked during the months of October, November, and December. Cyanide: Twenty-one tons of concentrates have been treated for a yield of 33 oz. 15 dwt. 10 gr. bullion, being at the rate of 1 oz. 11 dwt. per ton. Financial result: The financial position for the half-year has not been so good as usual, owing to the payable stone having pinched out, and, having no gold-returns, I was obliged to call upon the

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[illegible] for capital to pay expenses. The sum of £75 was raised from London. I have to thank the directors for the prompt manner in which the money was sent every month. This is the first time that I have required assistance from Home in connection with the Premier Mine, and I trust that we shall soon again strike payable stone, and be able to work the mine at a profit. The following are the amounts of money expended on the principal workings in the mine: Mining, £346 2s. 9d.; mine-maintenance, £77 17s.; mining, £149 15s. 3d.; trucking and hauling, £244 0s. 9d.; development, £324 15s. 6d.; prospecting, £149 6s. 11d. Owing to the mine being in an out-of-the-way place, timber and other materials for keeping the mine in repair and for general use are very expensive."

Indian Chief and Wynard Crus-mining Company (Alan Patton, Mine-manager, Macetown).—29/1/04: On this date there were no men employed in the Tipperary Mine, but Mr. Patton informed me that prospecting and developing operations had been carried on, and it was deemed advisable to amalgamate and by this means the company a scheme whereby the mine could be properly developed. This scheme, which provides for the installation of suitable winding and pumping machinery, was being considered by the London board of directors.

New Zealand Consolidated Gold-mines (Limited), Macetown (L. O. Beale, jun., Legal Manager, Dunedin).—29/1/04: This proprietary was formed to purchase from Mr. W. J. Farrell all his mining rights, comprised in two special claims of 156 acres 2 roods 25 perches in the Macetown District. A tributary was duly granted by the legal manager to proceed with the work of opening up and developing the property. On the date of inspection five men were employed. A drive had been put in 300 ft. to the reef and well timbered. Latest information is to the effect that owing to some delay in completion of the transfer of the property operations at the mine have been suspended in the meantime.

Richard Balch's Quartz Claim, Macetown.—Mr. Balch has been prospecting a reef in Caledonian Gully, half a mile east of the Tipperary Mine. A level was driven 25 ft. to cut the reef which, at this point, proved to be 2 ft. in width, and to have an assay value of 2 oz. 2 dwt. to the ton. A crushing of 25 tons resulted in a yield of 52 oz. of retorted gold. Further development of the property is being proceeded with.

Anderson, Hannah, and Party, Macetown.—This party have taken up an area on the same line of reef and adjoining Balch's area. The reef is being opened up, and prospects are said to be encouraging.

Beale and party and several other prospectors are prospecting a line of reef parallel to that on which Balch is working. Balch's discovery has thus given an impetus to prospecting for payable reefs in the district.

Patrick Barron's Quartz-mine, Arrow River.—(Area, 4 acres).—Mr. Barron has gone to considerable trouble to prospect this quartz reef, but he is much hampered by the want of a good road and the general inaccessibility of the mine, which is situated at a considerable elevation above the Arrow River.

Cromwell.

Cromwell Mine Syndicate's Quartz-mine, Bendigo (W. T. Talboys and D. B. Waters, Trustees).—This syndicate has secured the property of the Cromwell Proprietary Gold-mining Company (Limited). Since the purchase was completed no progressive works have been undertaken with regard to prospecting or developing the mine. The tributing party, Edwards and Pascoe, have crushed several parcels of good stone taken from different places on the lease. This tribute agreement has now expired, and all mining operations are at a standstill at present.

Bendigo Tailings Syndicate, Bendigo.—This syndicate having gone into liquidation the cyanide plant has been idle throughout the year.

Alta Mine, Bendigo.—A considerable amount of prospecting was done over this lease during the year by one man. This work was discontinued towards the end of the year, and the mine closed down.

A party of prospectors have been prospecting a line of reef for some time at the head of Boundary Creek, Leaning Rock Range. It is too early yet to say what success has attended their efforts.

Bannockburn.

Go-By Quartz-mine, Carrick Range (J. B. Holliday, owner).—The owner has been prospecting this property for the past seven years, and has completed a considerable amount of work upon it. Latest information from the mine is to the effect that fair stone has been opened out, and that it is the intention of the owner to proceed at once to develop the mine and to erect the necessary crushing plant.

Messrs. Lawrence Bros., Carrick Ranges.—About 100 tons of quartz has been crushed in the Star of the East battery by Messrs. Lawrence Bros.

There have been no further developments in quartz-mining on the Carrick Ranges. Operations are still suspended pending a satisfactory method being discovered of treating the refractory ore.

Nevis.

A party of prospectors were engaged during the summer months prospecting an extensive area of country at the Upper Nevis. I understand that they failed to locate any payable reefs.

Bald Hill Flat.

Whites Reef, Bald Hill Flat (R. P. Symes, owner.)—Mr. Symes still continues to prospect this property, in which he has great confidence. Two men are employed driving a level and rising at intervals to prospect the ground overhead, and also to secure ventilation. Small quartz leaders are met with during the progress of the work. The quartz is stacked and then crushed in a five-head stamper-battery.

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Excelsior Mine, Bald Hill Flat (Thomas Holden and R. Gray, owners).—Two men have been engaged in this mine throughout the year. Work has been carried out on the usual lines, but with apparently unsatisfactory results. The mine is situated on the Old Man Range. The quartz is crushed in a three-head stamper-battery.

Campbell's Gully, Obelisk Range.—Some attention was given to this locality recently. There are several known reefs on this range, but the inaccessible nature of the country for the greater part of the year hinders their development. D. H. Parker has applied for and been granted a special quartz claim of 100 acres.

Alexandra.

Conroy's Gully Reef, Alexandra.—Two prospectors, J. Robertson and M. Padgett, struck a small surface leader carrying good gold, and they are now engaged prospecting. A shaft has been sunk to a depth of 40 ft. on the leader, which at this depth has a thickness of 18 in. Gold-bearing stone can be picked up over the surface in the alluvial deposits. There was a battery on this line of reef some thirty years ago. Until further development-work is carried out it is difficult to form an opinion regarding the permanency or value of this latest discovery.

Rough Ridge.

Rough Ridge Quartz Reef, Rough Ridge (F. H. Perry).—This mine and battery have been idle throughout the past year.

Waipori.

O.P.Q. (*Waipori*) *Gold-mining Company* (*Limited*).—This mine continues to be shut down. Lately a sale of the winding, pumping, and crushing machinery resulted in several lots being purchased and removed to other parts of the Otago District. It is understood that the property will be taken up by a smaller company, and the mine opened out on a scale of lesser magnitude than heretofore. The close proximity of electrical generating plant at the Waipori Falls should enable some of the low-grade reefs in the Waipori district to be worked at a profit. During the year quartz-mining in the Waipori district has been absolutely at a standstill.

Milton.

Last Chance Quartz-mine, Canada Reef (Thomas Park, owner).—The mine is situated about one mile eastward of that worked by the late Mr. Lawson. Some prospecting and shaft-sinking had been done several years ago, when the reef was pronounced unpayable.

Recently Mr. Park and others took it up again when the quartz (which is highly oxidized) was proved to be very payable, battery results yielding 1 oz. to 3 oz. of gold per ton of quartz. A low level has been driven about 200 ft. on the lode, and a shaft sunk from the plateau affords ample ventilation. Timber in use in the level is too light, and may not be expected to resist the pressure which is bound to come as the result of stoping operations when the mine is more fully developed. However, an experienced mine-manager has been appointed, and improvement may be expected. A ten-head battery has been erected at the mine. Ten men are employed.

Macrae's.

Bonanza Mine, Macrae's (L. O. Beal, jun., owner).—Mining operations at this mine were suspended during the year, but the owner informs me that the property will receive further development in the near future. The results obtained from previous operations justify a further trial being given to this mine.

Mills's United, Macrae's (H. N. Mills and Sons, owners).—16/6/04: The stone obtained from the reef on Horse Flat proved to be too low grade to pay for extraction of the gold by the ordinary quicksilvered battery-plates. Work was therefore discontinued, and the complete crushing plant sold for removal to a property near Mount Highlay.

Matheson's Run Reef, Mount Highlay.—A syndicate composed of Hyde and Macrae's residents have taken up an area on the Mount Highlay line of reef. The reef is said to prospect well, both in regard to the gold-contents and to the scheelite associated with the quartz. Preparations are now being made to develop the mine and erect the necessary crushing machinery with gold-saving plates and concentrating appliances for saving the scheelite.

Mount Highlay Quartz-mine.—Mr. Charles Munn is engaged prospecting on the line of reef to the north of the Moreburn Creek, near to where the battery is situated. The older workings are abandoned, and there is no present prospect of their being gone on with, although from indications there is no apparent good reason for suspension of the work.

Gilivern Mine, Dunback Hill, Stoneburn (Alfred G. Davies, owner).—15/6/04: Three men are employed quarrying surface stone from various points on freehold property. The quartz is carted to and crushed in a five-head battery, power for which is supplied by a Ransome portable steam boiler and engine. The tailings are still being saved with a view to their future profitable treatment by cyanide.

Gilmour and Party, Dunback Hill, Stoneburn.—15/6/04: A considerable amount of prospecting-work by driving was done on this area, but the results obtained did not justify further expenditure of time and money. This party have now bought Mill's United Battery, which they intend to shift and re-erect on a lease taken up on the Mount Highlay line of reef. This plant should therefore shortly be in operation.

Golden Bar Gold-mining Company, Stoneburn (D. Peddie, mine-manager).—15/6/04: This mine is in good working-order. Timber is well used in the stopes and levels. Ventilation, good. Rules

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posted. Explosives are stored in a suitable magazine, and carefully handled. Nine men are employed in and about the mine and battery. The tailings from the battery have been saved for some time with a view to chemical treatment. The right to treat these tailings by cyanide for extraction of their gold-contents was secured by Mr. W. A. Riddle, and at the end of the year he was proceeding to erect the necessary plant.

Golden Point Quartz-mine, Golden Point, Macrae's (W. Donaldson, Mine-manager).—16/6/04: A new low-level cross-cut has been driven 250 ft. to a point 30 ft. below the reef. A rise has been put up from this point to the reef, and stoping operations resumed. A steam engine and boiler have been installed to provide motive power for the battery when water is scarce during the dry season. The mining operations are well conducted. Timber is well used throughout the mine; explosives are well stored and carefully handled. Rules posted. At the end of the year the mine had been well developed, and twenty-three men were employed in and about the mine and battery. Scheelite is also a product of this mine, being saved either as picked stone in the mine or in the form of concentrates from the Woodbury shaking-table.

Ounce Reef, Murphy's Creek, Macrae's (Spiers and Ross, Owners).—When this locality was visited the mine was idle. The lease subsequently lapsed, and the area was secured by Messrs. W. Lidstone, James Bryce, and James McInnes. Work was at once commenced in the stopes where the previous tributers had left off. There is a small percentage of scheelite associated with the gold-bearing quartz, and the owners intend to take steps to save this valuable mineral.

Maritana Reef, Golden Point, Macrae's (M. C. McGill, owner).—As this battery depends for motive power upon water, operations were suspended during the dry season. Work has now been resumed, and quartz is being mined and crushed. Two men are employed. As constant work is hampered by shortage of water a nine brake horse-power oil-engine has been installed to supply motive power during dry weather. A Frue vanner has been obtained to effect a saving of concentrates.

Quartz-mining has progressed steadily in and around the Macrae's district during the year. This progressive movement has been assisted to a certain degree by the present value of scheelite, which is associated in payable quantity with the quartz at various points along this extensive line of reef. Prospectors are turning their attention towards opening up the reef at the various points with a view to ascertaining the permanency in value of the quartz.

Nenthorn.

Nothing of a progressive nature has resulted in this district during the past year. The sections held by Alexander Ewart and Samuel Stevens were surrendered absolutely during the year. Hugh Adam was granted a special quartz claim in Section 3, Block VII., Nenthorn District. Alexander Sligo was also granted a special quartz claim in Section 2, Block I., and Section 3, Block V., Nenthorn District.

Barewood.

Barewood Gold-mining Company, Barewood (W. E. Hitchcock, Mine-manager).—16/3/04: The mine-workings are now confined to the 188 ft. level. Nine men are engaged taking out leading stopes and timbering the level and stopes. The gold-bearing chute of stone clings to the hanging-wall, and varies from 10 in. in width to 4 ft. All the stoped-out ground to the rise is filled up, and there is no ground standing open except the ventilating levels and passes. Ventilation good throughout the mine, explosives well stored and carefully handled, rules posted. The new battery-framing is being erected, and the machinery is on the ground. The tailings are being saved with a view to future treatment by cyanide. All the surface plant is in good condition.

12/7/03.—(H. S. Molineaux, Mine-manager): Opening out stoping-ground in level west from crosscut No. 2 flat. Reef at level-face 5 ft. in thickness, but the line of reef somewhat interfered with by a fault or slide. Country standing well. In the levels good manuka timber is in use and well set. Air excellent; second outlet and return airway by passes to No. 1 level. The erection of a new ten-head stamper-battery has been completed. Motive power is supplied by an 8-horse-power oil-engine, and the plant is working smoothly. Concentrates are saved and shipped for treatment to the Cockle Creek Smelting-works, New South Wales. About 3,000 tons of tailings is stacked awaiting treatment by a cyanide plant, which is under course of erection.

Southland.

Stewart Island.

Cornwall Prospecting Claim, Pegasus District (J. R. Thomson, Owner).—This mine is still being prospected, with a view to working for tin and wolfram. A crosscut is being driven to reach the lode. Four men are employed.

Hannings' Mineral License, Pegasus District.—This mineral license has been granted to search for all minerals and metals other than gold.

J. W. Thomson and J. W. Murdock, Special Mineral Claim, Pegasus District.—This area has been taken up to search for tin and wolfram.

Baden-Powell Quartz-mine, Stewart Island.—A registered company which had been formed to exploit the country has become defunct owing to want of funds.

Preservation Inlet and South-west Coast of Otago.

There is nothing of importance to record during the year. The New Star Quartz-mine has been sold, and it is understood that operations are to be continued. This lease of 77 acres (equipped with a ten-head battery and fourteen berdan pans) was offered for sale by auction in March, 1904. The property was bought for £85 by Mr. McCreath. There are valuable water-rights and an aerial tramway attached to the property.

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Accident.

8/8/04 (non-fatal): William Thompson, miner, Premier Mine, Macetown, sustained fracture of two ribs by fall of rock from roof of tunnel.

OTHER MINERALS.

Cinnabar.

Waitahuna Cinnabar Company.—Owing to lack of funds to further develop this property the mine has been idle throughout the year. The original company went into voluntary liquidation, and the property was purchased by Messrs. R. A. Ewing and P. Miller, directors of the late company. I understand that it is the intention of the owners to form a small company to further develop the mine.

Scheelite.

Twenty-one tons are returned as having been produced and exported during the year from the Macrae's district. Attention is being given to the deposit which exists at Glenorchy, Lake Wakatipu, and mining operations there may be resumed in the near future. Deposits of this mineral are also known to exist at the Alta Reef, Bendigo, and in the Lammerlaw Ranges.

Antimony.

Lodes occur at Alexandra, Waipori, Mount Stoker, and the Carrick Ranges, none of which are at present being worked.

Platinum.

8 oz. 11 dwt. 10 gr. is returned as having been recovered in conjunction with the gold at the Round Hill Gold-mining Company's Sluicing claims.

Copper.

Lodes occur at Reedy Creek, Upper Waitahuna, and Moke Creek, Wakatipu District.

An area has been taken up on this latter deposit by a Dunedin syndicate. A quantity of copper-ore has been taken out and parcels sent to Dunedin and the Thames for valuation of the ore contents.

Greenstone.

Extensive greenstone-deposits were discovered and prospected at Milford Sound, Otago. Operations were carried on at about 1,400 ft. above sea-level by trenching and driving. A seam of greenstone was located and a tunnel was driven to crosscut on to the reef, from which some good samples of greenstone were obtained.

Phosphate Rock.

Operations have been steadily conducted during the year, and 2,678 tons of rock produced for treatment at the chemical works at Burnside.

Tin.

Prospecting operations are being conducted in the Pegasus District, Stewart Island.

Fireclay.

Used for manufacture of fireclay goods, bricks, and sanitary pipes.

The following outputs have been returned: Springfield Colliery, Springfield, Canterbury, 414 tons; Homebush Colliery, Glentunnel, Canterbury, 209 tons; C. Austin, Sheffield, Canterbury, 590 tons; P. McSkimming, Benhar, Otago, 2,100 tons: total, 3,313 tons.

Hæmatite.

One hundred and eleven tons have been taken out by Messrs. McGilvray, Mataura, for use by the Mataura Paper-mills.

Deposits exist in various localities—viz., Table Hill, Waitahuna, Clyde, &c.

Marl.

A deposit of clay-marl was discovered at Burnside, near Dunedin. An examination of the deposit by Mr. L. O. Beal, jun., engineer to the Proprietary Syndicate, proved at least 15½ acres of marl-bearing country. The marl-deposit is overlaid by volcanic clays. The amount of easily procurable marl is estimated at 1,600,000 tons. The material is uniform in texture, and carries from 15 per cent. to 50 per cent. of lime. A company has been formed with a capital of £10,000, and inquiries are now being made with regard to the supply of the necessary machinery. Tests of the marl and of the cement made therefrom were made by the Public Works Department and by several leading building firms, all of which were considered satisfactory.

Building-sand.

13,338 tons of building-sand had been produced from the Green Island Coalfields for use in Dunedin and surrounding districts.

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[HYDRAULIC SLUICING AND ALLUVIAL MINING, INCLUDING GOLD-DREDGING.

OTAGO.

Macrewhenua District.

Aided by the continuous supply of water supplied by the Mountain Hut Water-race, the Macrewhenua Diggings have progressed during the year, and good wages were obtained by the contributors. On the ground having proved payable there has been a strong demand for the available five heads of public water.

GLENORE.

Alluvial mining is at a standstill in this district. There were two dredges in operation during the year.

Manuka Creek.

Manuka Creek Mining Company (Limited), Manuka Creek (Adam McCorkindale, Manager).—This company has secured Stewart's sluicing claim on Manuka Hill. The water-supply has been considerably improved, and better results are now expected from this claim. The tailings are utilised for ballast by the Government Railways. Seven men are employed.

Waitahuna.

German Flat Hydraulic Sluicing and Elevating Company, German Flat.—This company's water-race is now being diverted to work a claim in Waitahuna Gully.

Upper German Flat Hydraulic Sluicing Claim (S. Johnston and M. Girvan, owners).—The results obtained from this claim are said to be satisfactory to the working shareholders. Three men are employed.

Waitahuna Gully.

City of Dublin Sluicing Claim (J. Ferris and party).—Ground-sluicing operations are still being carried on in the cement-face.

Quilter and Sons Hydraulic Elevating Claim (Hugh M. Quilter and Sons) —Two men find employment in this claim of 2 acres. The water-supply is poor.

Thompson and Party (Norwegian Company) (C. Thompson, Manager).—Area of claim, 30 acres. Operations are being carried on in the cement-face, which is first broken up by blasting-powder and then sluiced to the elevator Five men are generally employed. For particulars of accident whereby John Lütgens was killed and John Larsen injured, 12th April, 1904, see list of accidents appended.

Sailor's Gully (Waitahuna) Gold-mining Company (Limited) (A. Barr, Manager).—Area of claim, 66 acres. Operations are being conducted in the cement-deposit, which, after being broken up, is sluiced to and raised by the elevator. Four men are generally employed.

Waitahuna Gold-dredging Company's Claim (W. Adams and party).—The German Flat water-race has been purchased and an extension of the race is under construction to bring the water on to this claim, which is to be worked by hydraulic sluicing and elevating. The hard and uneven schist bottom had proved unsuitable for bucket dredging.

Dredging.—Three privately owned dredges are at work in this district, and yield satisfactory returns. Two dredges were removed from the district during the year.

Wetherstone's.

Golden Crescent Hydraulic Elevating Company (W. F. Smyth, Manager).—Sluicing operations have been carried on throughout the year successfully. Area of claim, 90 acres, comprised of terrace and flat ground. Eight men are employed.

Golden Rise Hydraulic Elevating Company (F. Whelan, Manager).—Area of claim, 45 acres. The mode of carrying on operations in this claim does not vary, and sluicing is fairly continuous. Six men are employed.

Local Industry Gold-mining Company (George Dunnett, Manager, Wetherstone's).—A large area of shallow ground has been turned over during the year, and sluicing operations have been steadily carried on. Four men are employed.

Dredging.—The Happy Valley dredge having worked out its claim was closed down, and will probably be removed to a claim on the Pomahaka River, below Kelso.

Tuapeka

Blue Spur and Gabriel's Gully Consolidated Gold-mining Company (Limited), Blue Spur (J. H. Jackson, General Manager; J. Wren, Mine-manager).—The cement face is brought down by heavy blasts of roburite and sluiced away to the elevators, gold being saved in the tail-races which are paved with jasperoid boulders which occur in layers in the claim and are generally associated with gold-bearing strata. The low accidents-rate in this claim is an indication of the care exercised by the management and the employees in working the high cement faces. Mr. Jackson has kindly supplied the following particulars: "Only two paddocks have been in operation during the year under review, and their relative value has been reversed as compared with last year. The product of No. 1 has fallen off in value 1·92 gr., or 3·796d. per cubic yard. No. 2 has increased 0·804 gr. or 1·58d., a mean decrease of 1·095 gr. or 2·168d. per yard on the aggregate of the cement treated, sufficient unfortunately to render the past year the least remunerative since work was commenced on the cement-deposits in 1891. During the year 203,000 cubic yards of cement, containing only 3½ gr. (7d. in value) per yard, have been blasted from the working-faces, broken up by hand, sluiced through tail-races over 20 chains, elevated on No. 1 side 118 ft., on No. 2 side 70 ft., and finally stacked and distributed in Gabriel's Gully, and have left,—

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an infinitesimal, certainly, but still a profit on the cost of working. The output for the year has decreased as under; total gold won 1903–4, 1,669·48 oz., value £6,632 19s. 9d.; 1904–5, 1,524·80 oz., value, £6,062 6s. 2d.: a decrease of 144·68 oz., and £570 13s. 7d. Total expenditure in 1903–4, £4,375 5s. 10d.; in 1904–5, £4,558 4s. 3d.: an increase of £183 4s. 3d. The mean value of the cement treated this year as compared with last shows a serious falling-off, amounting to 1·095 gr. (2·168d.) per yard, while the cost of winning the gold increased from last year £2 12s. 6d. per ounce or 65·96 per cent. of its value, to this year £2 19s. 9¾d. per ounce or 75·19 per cent. of its value—an increase of 9¼ per cent. The pump used for unwatering the mine in place of the last drain having been altered and improved on lines suggested by experiments made by the mine-manager, Mr. John Uren, during last year has worked very satisfactorily and at a much higher efficiency than previously, the percentage of water abstracted from remunerative work for the purpose of pumping being reduced by more than one-half. The record shows 605,061,000 cubic feet used for sluicing and elevating, and 21,260,300 cubic feet used for pumping—a total of 626,321,390 cubic feet of water for all purposes. The ratio of pumping water is therefore 3·391 per cent. against 7·787 per cent. last year, a substantial saving of 4·396 per cent. I do not anticipate that this ratio can be lowered. Last year's work produced 5 dwt. 7 gr. (£1 0s. 11d.) per hour; this year's work produced 4 dwt. 7 gr. (16s. 8d.) per hour—a very serious reduction of 1 dwt. 2 gr. (4s. 3d.) per hour. Pumping, 555 hours at 16s. 8d. per hour, £463 6s.; less 75 per cent., £347 9s. 6d.: leaving the cost of pumping, £115 16s. 6d. Cost last year, £250 13s. 11d.: a saving of £134 17s. 6d. for the year. Wages paid, 1903–4, £2,675 14s. 8d.; 1904–5, £3,001 1s. 2d.: an increase of £325 6s. 6d. It was found impossible to keep down the wages to last year's level. Unless an ample quantity of cement is broken to keep the sluicing-nozzles and elevators employed at their full efficiency while working, waste of time is unavoidable and loss consequently occurs, while inefficient working entails loss of water—the unpardonable sin in hydraulic mining. The head races have not proved either troublesome or expensive for maintenance. Water-supply for 1903–4, 686·9 eight-hour days; 1904–5, 903·5 eight-hour days: an increase of 316·6 eight-hour days. Pumping 1903–4, 1,382·6 hours (172 days); 1904–5, 555 hours (69·4 days): an increase of 827·6 hours (103·4 days). Water used in mine for sluicing and elevating: No. 1 Division—1903–4, 3,769 hours (471·1 days); 1904–5, 4,525 hours (565·6 days): No. 2 Division—1903–4, 1,726·5 hours (215·8 days); 1904–5, 2,703 hours (337·9 days): total, 1903–4, 5,495·5 hours (686 9 days); 1904–5, 7,228 hours (903·5 days). An increase over last year of 1,732·5 hours (216·6 days), but less than 1902–3 by 275·5 hours (34·3 days). The total increased supply due to variations in the rainfall, &c., as compared with last year amounts to 904·9 hours (113·2 days). The following is a statement of work and values for the year 1904–5: No. 1 Division—hours sluicing, 4,525; cement, 113,125 cubic yards; gold, 941·01 oz.; value per cubic yard, 3·9927 gr. (7·88d.): No. 2 Division—hours sluicing, 2,703; cement, 90,010 cubic yards; gold, 583·79 oz.; value per cubic yard, 3·1132 gr. (6·14d.): total—hours sluicing, 7,228; cement, 203,135 cubic yards; gold, 1,524·8 oz.; value per cubic yard, 3·603 gr. (7·11d.). Mean value, 3·603 gr. or 7·11d. per cubic yard."

Kitto and Party's Hydraulic Sluicing and Elevating Claim, Munro's Gully.—The cement is brought down as usual by large blasts. It is then broken up and sluiced through a long run of boxes. Nine men are employed.

E. Brown and Party's Hydraulic Sluicing and Elevating Claim, Munro's Gully (lately Mills and party).—An improved water-supply has been obtained, and sluicing operations are still being carried on in the bed of Tuapeka Creek with fair success.

P. P. Thomas and Party's Claim, Munro's Gully.—A large area of terrace ground has been sluiced away during the year with payable results.

W. Hogg and Party, Tuapeka Flat.—Area of claim, 30 acres, comprising terrace ground in the valley of the Tuapeka River. The necessary arrangements for putting plant on the claim are not yet completed.

A. N. Wakefield and Party, Tuapeka Flat.—It is proposed to generate electricity at the Blackcleugh Stream and transmit the current to the claim, where it will be utilised to drive pumping plant in order to elevate water on the Tuapeka terraces for sluicing purposes.

John Roach and Party, Tuapeka Flat.—This party holds a claim on Tuapeka Flat which it is intended to work by hydraulic sluicing and elevating. A water-race from Gabriel's Gully has been applied for and granted subject to compensation being paid to freeholders *en route*. Pending settlement of these claims operations have not been commenced.

Dredging.—Three dredges continue steadily at work in this district, while two were dismantled during the year.

Waipori.

William Brown and Party's Sluicing Claim, Bungtown Flat.—Sluicing operations have been continued throughout the year, but the plant being small and the water-supply poor only a limited area of ground has been turned over.

Golden Padlock Hydraulic Elevating Claim, Mitchell's Flat (J. Gare and party).—Four working shareholders find remunerative employment in this claim.

Reef Creek Hydraulic Sluicing and Elevating Claim, Mitchell's Flat (F. Sandager and party).—Sluicing operations were commenced during the year and continued for some time. The results obtained not being satisfactory the owners have sold the property to F. W. Knight, of Waipori.

Farrell's Deep Lead Hydraulic Sluicing and Elevating Claim.—This claim is now being worked on tribute by Richard Cotton, who has removed the sluicing plant to a portion of the claim on the Lammerlaw Creek. The ground is easily worked and, since starting, operations have been conducted with success.

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Lammerlaw Creek Hydraulic Gold-mining Company (W. E. Caudwell, Manager).—Sluicing has been steadily carried on at this claim, and a large area of ground has been worked during the year.

Sew Kew and Party, Lammerlaw Creek.—This is a special claim of 40 acres worked by hydraulic sluicing and elevating, with satisfactory results. Four men are employed.

Bakery Flat Hydraulic Sluicing and Elevating Company, Upper Waipori (J. T. Johnson, Manager).—Johnson's submerged-jet dredge started operations on this claim during the year, and proved itself capable of elevating and treating a large amount of material. The dredge started work on a poor portion of the claim, and satisfactory results were not obtained. For this reason hydraulic sluicing and elevating has again been resorted to on a payable portion of claim.

Golden Point Hydraulic Sluicing Claim, Upper Waipori (D. O'Brien, Manager).—Four men have been continuously employed throughout the year in this claim. Sluicing operations have yielded payable results.

Post-office Creek Hydraulic Sluicing Claim, Lower Waipori (J. R. Parker, Manager).—This claim has provided employment for four men during the year, but operations were not attended with great success. The water-supply is inadequate and the ground continues difficult to work.

Munro and George's Hydraulic Sluicing Claim, Lower Waipori.—Sluicing operations in this claim have again advanced to the solid face, and when the claim was inspected it was found necessary to caution the men against approaching or working under the high faces. Four men are employed.

W. McMillan's Alluvial Claim, Post-office Creek, Lower Waipori.—This claim has been extensively worked for many years, during which time a considerable area of gold-bearing wash was blocked out. The claim has now been abandoned.

Ah Yet's Hydraulic Ground-sluicing Claim above Big Flat, Lower Waipori.—This claim continues to be worked on the same lines as in former years.

There are several fossickers scattered about the Lammerlaw Ranges in the creeks and gullies.

Ten dredges are still in active operation in the Waipori district, while two have been dismantled and removed from the district. One dredge has been idle throughout the year. O'Brien's application of hydraulic power to dredges has proved a boon in this district where coal is costly.

Beaumont.

Champion Hydraulic Sluicing and Elevating Company (Limited), Beaumont (J. Fahey, Manager).—Area of claim, 18 acres. The head race was extended half a mile, and the line of pressure-pipes was then shifted to command the upper section of the claim. Since the completion of these improvements sluicing operations have been steadily conducted, although hampered somewhat by the drainage-inflow from the river and by the buried timber. Seven men are employed in the claim. During the year the company's dredge was sold for removal to a claim at Waikaka.

Dredging.—Two privately owned dredges have been at work in the district on the Clutha River during the year with varying results.

Island Block.

Island Block Gold Dredging and Sluicing Company, Island Block (A. C. Perkins, Dredgemaster; D. Weir, Sluicing Manager).—The sluicing plant has continued to work steadily throughout the year, whilst the dredge was also in operation the greater part of the year. Late in the year the dredge was beached and the paddock pumped out. The bottom was then elevated and cleaned up as a test of the efficiency of the dredge in dealing with the hard uneven schist-rock bottom. The results were said to be favourable to the efficiency of the dredge, which has not yet, however, resumed operations. Twenty men have been employed by the company during the year.

Undaunted Gold-mining Company's Claim, Tallaburn (J. Kirkpatrick, Manager).—Sluicing was carried on during the greater part of the year by the proprietors, Messrs. Edie and Kirkpatrick. In October the claim was sold to the Tallaburn Hydraulic Sluicing Company.

Tallaburn Hydraulic Sluicing Company (Limited), Tallaburn (John Whelan, Manager).—This company was formed to acquire the interests of Messrs. Edie and Kirkpatrick, and of Messrs. Whelan and Curtin. These claims were amalgamated and sluicing operations were resumed in November. Six men are employed in the claim.

E. Curtin and F. Whelan's Sluicing Claim, Currie's Flat.—The water-supply on this claim being inadequate very little sluicing was done on this property. This claim has now been amalgamated with the Undounted to form the Tallaburn Hydraulic Sluicing Company's claim.

Gunton's Beach Hydraulic Sluicing Claim, Horseshoe Bend.—Having to combat with a poor water-supply and low pressure the owners of this claim are unable to conduct operations on an extensive scale.

Dredging.—In addition to the Island Block dredge, already mentioned, there is one other dredge in operation in this district on the Clutha River.

Miller's Flat.

Golden Run Hydraulic Sluicing and Dredging Claim, Miller's Flat.—Area of dredging claim, 81 acres. Area of sluicing claim, 52 acres. The company's dredge has been in operation throughout the year. The elevating plant has now been removed from the sluicing claim on the western bank of the river, and will be used to strip ground ahead of the dredge. The work of relaying the pipe-line to command the ground to be stripped, and of suspending the pipes across the Clutha River, is now being carried on. Twelve men have been employed during the year.

Dredging.—Nine dredges have been steadily at work during the year, while two dredges of the older type have been superseded by up-to-date machines.

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Kelso.

McKenzie and Party's Hydraulic Sluicing Claim, Lower Pomahaka.—Area of claim, 5 acres. The ground is shallow and easily treated. Three men are employed.

The only other form of mining in this district is dredging. The Ardmore dredge, a privately owned concern, is working at Scrubby Flat, Greenvale, on freehold land. A claim has been taken up below Kelso, on the Pomahaka River, to which a dredge is under course of removal. The Greenvale dredge lies sunk in the Pomahaka River.

Roxburgh.

Hercules Sluicing Claim.—This claim and plant are still idle, but the scheme to utilise the water-power on a large scale to generate electricity and also to work Anderson's Flat by hydraulic sluicing and elevating is still being promoted. The claim is at present held under protection.

Roxburgh Amalgamated Mining and Sluicing Company (Limited) (J. H. Waigth, Manager). — The extensive mining operations in this claim are conducted on the same lines as in the past with due regard to the efficient working of the mine and to the safety of the men employed. A good body of gold-bearing wash, evidently old river-bed, has been opened out in the present working-paddocks, and this insures profitable operations being carried on for some time. For particulars of accident whereby George Taylor and John McNab were accidentally killed see list of accidents appended. Eighteen men are employed in connection with the claim and water-races. The manager has invented a simple appliance for regulating the feed to the elevator. A vertical box with central division and sides 6 in. apart are bolted up and inserted alongside the lift so that stones of more than 6 in. diameter are kept back from the buried elevator-throat when opening up a paddock.

Ladysmith Gold-dredging Company (Limited) (W. Donnelly, Manager).—Area of claim, 60 acres. This company's claim is still being worked by hydraulic sluicing and elevating. The water-supply has been improved and the pressure increased, thus enabling a larger amount of material than formerly to be turned over. The sluicing plant is operating on a highly payable seam of wash, and the prospects before the company are bright. Eight men are employed.

Commissioners Flat Sluicing Claim (Coulter and party; R. George, Manager).—With the increased water-supply a greater amount of material is treated. The heavy overlying burden is swept off into the river, and the lower material is elevated and passed over boxes fitted with gold-saving appliances. Four men are employed.

Golden Gate Sluicing Claim (Manuel Bros.).—This claim is worked on a small scale by hydraulic sluicing and elevating. Three men are employed.

Pleasant Valley Gold-mining Company, above Coal Creek Flat.—Some improvements were effected to the water-supply and to the line of pressure-pipes, and operations were resumed during the year. The mine has recently changed ownership again, the purchaser being Mr. A. McPherson, of Coal Creek. The new proprietor intends to still further improve the condition of the plant, and thus give the claim a thorough trial.

Butterfly Sluicing Claim, Teviot (Weatherall Bros.).—Two men find employment in this ground-sluicing claim.

There are several miners in this district working along the banks of the Clutha River.

Dredging.—There are six dredges in this district in active operation on the Clutha River when the river is favourable for dredging, three of which are privately owned.

Bald Hill Flat.

Carroll and Lynch's Sluicing Claim.—The owners of this claim continue to work on the usual lines and to obtain payable results during the sluicing season.

Mitchell's Sluicing Claim.—This ground-sluicing claim affords employment for one man.

J. Ewing and J. Dowdall's Hydraulic Sluicing Claim (W. McNeish, Manager).—Operations during the sluicing season continue to yield satisfactory results to the owners.

Last Chance Hydraulic Sluicing and Elevating Company (J. McNeish, Manager).—Area of claim, 96 acres. Ten men are generally employed in this claim, in which operations are being conducted on the usual lines, with payable results.

Stringer and Miller, Fourteen-mile Beach.—These two men are engaged stripping on the river beaches.

Dredging.—There were three dredges on the Clutha River in the gorge below Bald Hill Flat. As a very slight rise in the river prevents successful operations, the past season has not been favourable for continuous work.

Naseby.

Mining-work in this district continues much the same as last year. It is to be noted that the easier-worked ground is becoming exhausted, and larger volumes of water are becoming concentrated upon the deeper class of ground, by which means the average number of men employed is maintained. Work this year has been somewhat irregular, owing to the dryness of the season. There are considerable areas of auriferous ground in the district outside present mining operations, which may be expected to be utilised as the water on present workings becomes liberated.

Dredging.—Roberts's Naumai dredge, Upper Kyeburn, which is now the only one in this district, has been idle during the latter part of the year.

Hamilton's.

Perseverance Sluicing Claim.—Henry Horn and Guy Hooper continue to work this claim. Three men are employed.

Messrs. Roberts Bros. have a sluicing claim in this district.

A few men are employed on this field sluicing with the small supply of water available.

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Patearoa.

Patearoa Hydraulic Sluicing Claim (D. C. Stewart, Manager).—This claim is owned by a private syndicate, and has been worked steadily during the year. It is intended to work the flat portion of this claim by dredging. Recently some very rich wash has been struck in this claim. Area of claim, 18 acres.

There are a few other parties sluicing in this district in proximity to the Taieri River.

Upper Taieri River.

Canadian Flat Hydraulic Sluicing and Elevating Claim.—No movement has been made in connection with this property during the year. It is quite probable, however, that the works in connection with the development of this claim will be completed in the near future, and sluicing operations commenced.

Messrs. McColl Bros. have discontinued working their hydraulic sluicing claim on the Upper Taieri.

Fortification Hydraulic Sluicing Company, Red Swamp, Lammerlaw Ranges.—The necessary plant was erected on the claim, and an area of ground was worked. The results obtained did not come up to expectations, but I understand further prospecting-work has been gone on with.

Serpentine.

Mining matters in this district are very quiet. I understand that Messrs. Gunton Bros. have discontinued working in their sluicing claim. There are a number of fossickers scattered over the Lammerlaw Heights during the summer season.

Deep Stream.

Deep Stream Amalgamated Hydraulic Sluicing Company (Limited), Deep Stream (A. C. Buckland, Manager).—This sluicing and elevating claim continues to be systematically worked, with results which are satisfactory to the shareholders. Fifteen men are employed during the year.

Sutton.

Hibernia Claim.—The claim has been sold, and is now being worked by a party of working-miners. The reef is rising, and water-pressure available is a gradually decreasing quantity.

Rock and Pillar.

Rock and Pillar Sluicing Company (N. Maloney and party).—Three men are employed in this alluvial sluicing claim.

Idaburn.

Wheeler and Party's Sluicing Claim.—Ground sluicing. Two men.

Blackstone Hill.

Blackstone Hill (including Ida Valley.)—About fifteen men find employment in various parts of this district. The wash is usually highly auriferous, but the water-supply is poor.

Dredging.—The Cairntrodlie dredge, owned by the Wallis Syndicate, Gore, is the only dredge in operation in the Ida Valley.

St. Bathan's.

Eagle and Gray's Sluicing Claim.—No work has been done on this property during the year. The claim is, in the meantime, held under protection, awaiting the deepening of the main sludge-channel.

Scandinavian Water-race Company, Surface Hill (N. Nicholson, Manager).—The various claims held by this company comprised a total acreage of 100 acres. Sluicing operations are conducted on an extensive scale. An average of twenty men were employed during the year.

United M. and E. Water-race Company (P. T. O'Regan, Manager).—Area of claim, 24 acres. Nine men are employed in this claim, in which sluicing operations are conducted on an extensive scale.

P. Hanrahan's Sluicing Claim.—This claim is worked by hydraulic sluicing and elevating with water rented from the Scandinavian Water-race Company.

Shamrock Gold-mining Company, Hawkdun Station.—The claims had been sold, and operations are being continued on similar lines to heretofere.

Kildare Hill, St. Bathan's.

No work has been done here for some time, owing to the sludge-channel not being deep enough in the meantime to carry away the tailings.

Cambrian's.

Shepherd's Flat Claim.—This claim and water-race have been rented by the proprietor (Mr. John Ewing) to Messrs. P. McCarthy and Gilbert O'Hara, who are working on a small scale.

Cambrian's Claim.—This water and water-race have also been rented by the proprietor (Mr. John Ewing) to two small parties—Owen Jones and party and Rees Hughes and party, who are working on a small scale.

R. Jones and Morgan continue ground-sluicing at the Lauder.

G. Jones and Son are ground-sluicing at Cambrian's.

Vinegar Hill Hydraulic Sluicing Company, Cambrian's (T. Morgan, Manager).—Area of claim, 62 acres. This company still continues operations at Vinegar Hill. A large body of water under high pressure is brought on to the claim, and a considerable amount of material is treated. Since the commencement of work at this claim the results have not been satisfactory, but recently an improved seam of wash has been opened out. Seven men are employed.

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Fordham and Gay's Hydraulic Sluicing Claim, Cambrian's.—This party continue to work their claim on a small scale, with apparently satisfactory results.

Gannon's Alluvial Sluicing Claim, Vinegar Flat, Cambrian's.—This claim of 16 acres is the property of the Bank of New South Wales, and is worked by Mathew Gannon.

Matakanui.

Undaunted Gold-mining Company, Matakanui (T. C. Donnelly, Manager).—Area of claim, 114 acres. The mode of working this claim is by hydraulic sluicing and elevating. The company has had a successful year. Nine men are employed.

Tinker's Gold-mining Company, Tinker's (J. Naylor, Manager).—The operations of this company have also been attended with success during the year. Six men are employed in the claim, which is worked by hydraulic sluicing and elevating.

Matakanui Gold-mining Company (H. Norman, Manager).—Area of claim, 45 acres. Good results have been obtained from this claim during the year. Seven men are employed.

J. Symes and Sons' Sluicing Claim, Matakanui.—The owners still continue sluicing operations on the flat below the Matakanui Township.

Drybread Diggings.

As all suitable water-supplies are concentrated on Tinker's Goldfield, these diggings are still abandoned to a few fossickers.

Devonshire Diggings.

As at Drybread, these diggings are almost deserted by miners.

Ophir.

There is still very little mining in this district, although there are large areas of auriferous ground awaiting suitable water-supply. Some ground has recently been taken up in the district for dredging purposes.

Springvale.

Springvale Sluicing Claim, near Alexandra South (J. Gartley, Manager).—Sluicing operations on a small scale are still being carried on at Springvale.

Dredging.—The Olrig dredge continued to work steadily during the year, and to yield satisfactory results. The Chatto Creek dredge has been inactive throughout the year.

Alexandra South.

Alexandra Bonanza Gold Dredging and Sluicing Company, Galloway Flat (J. Matthews, Manager).—Ground-sluicing has been carried on during the greater part of the year, but the area worked did not yield large results. From 16 to 18 heads of water are delivered to claim under pressure of 80 ft. vertical, the ground averaging 20 ft. in depth.

Tucker Hill Sluicing Claim, Alexandra South (Rivers and Gartley, Owners).—This claim on Tucker Hill has been worked out, and the water-race cut round to Richmond Hill.

Richmond Hill Sluicing Claim, Alexandra South (James Rivers, Owner; George Campbell, Manager).—Area of claim, 10 acres. This ground-sluicing claim is worked with the water and mining plant transferred from Tucker Hill. Six men are employed.

Manorburn Gold-mining Syndicate, Galloway Station.—A large area of auriferous terrace ground is at present held by this syndicate. Two men are engaged prospecting the area by shaft-sinking and by driving. Though not at present available, water under suitable pressure could be brought to command this ground.

Golden Bend Gold-mining Company, near Alexandra South.—Shaft-sinking operations on this claim were seriously interfered with by floods in the Manuherikia River, which caused a stoppage. Work has been resumed, and the claim is now in full working-order.

Several parties are engaged ground-sluicing around Blackman's, Conroy's, and other gullies at the foot of the Obelisk Range.

Dredging.—Alexandra may be considered the centre of river-dredging in Otago. There are six dredges in active operation on the Clutha River, in the gorge below Alexandra Bridge, and eighteen dredges are at work on the river and in the banks above the bridge. The majority of these dredges are on the dividend-paying list. As in the Miller's Flat district, it is noticeable here that the dredges of smaller type are being replaced by larger and more efficient machines, with which it is possible to rework ground already turned over and extract therefrom profitable returns. The electrical installation in connection with the Earnscleugh No. 3 has proved a success, and it is now proposed to equip a second dredge with this power at an early date.

There are also two privately owned dredges at work on the Manuherikia River.

Clyde.

Individual mining is practically a thing of the past in this district. About three men are engaged in alluvial mining. The Shepherd's Flat dredge is at work on the Fraser River.

Dredging.—There were five dredges on the Clutha River near Clyde working when the river was favourable. A further trial will be given to that stretch of the river above the Clyde Bridge, which so far has not justified the amount of money expended in placing dredges thereon.

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Cromwell.

A party of Chinamen have obtained good returns for many years from a claim on the banks of the Kawarau River, above Cromwell Township. In December, 1904, the claim was abandoned, owing to loss of fall for discharge of tailings. Sluicing operations are also conducted on a small scale around Lowburn and Quartz Reef Point.

Dredging.—On the length of river from Waenga to Cromwell Township there are five dredges which operate during the winter season, while the three dredges owned by the Junction Electric Gold-dredging Company are now at work on the Kawarau above its confluence with the Clutha River. During the past two years, considerable attention has been given to the Clutha Basin, between Lowburn and Cromwell. There are now six dredges in active operation in this locality, all obtaining good returns of gold. The ground is deep and heavy to work, and requires machines of an efficiency equal to that of the Rise and Shine and Rising Sun dredges.

Bannockburn.

A. T. Aitken's Claim.—A ground-sluicing claim of 2 acres, in which two men find employment.

Crabbe Bros.' Claim.—This claim is still being worked by ground-sluicing with water brought in from Shepherd's Creek in the Wealth of Nations water-race. Three men are employed.

Gair and Murray's Sluicing Claim.—Two men are employed ground-sluicing in this claim.

There are several other miners in this locality holding small areas and working with intermittent water-supplies.

Kawarau Gorge: Robertson's Terrace.

Last Chance Claim.—T. Craig holds a claim of 5 acres, on which he is engaged driving out the auriferous washdirt.

Mining on this terrace is now almost at a standstill, owing to the patchy nature of the auriferous wash and the scarcity of water for sluicing.

There are several fossickers earning a living in Kawarau Gorge.

Dredging.—The stretch of the river for three miles above Bannockburn Bridge over the Kawarau River has proved phenominally rich, as proved by the operations of the Cromwell and Electric Gold-dredging Company's dredges. The Cromwell claims became worked out during the year.

Cardrona.

Walter Little's Hydraulic Sluicing Claim, Cardrona Valley (Ed. Barker, Manager).—Operations have been steadily continued during the sluicing season with moderate success. Owing to the heavy class of material operated on progress is slow. Six men are employed in the claim.

A. Loft and party have discontinued driving out the wash in the valley above Cardrona Township

Magnus Henderson and party continue sluicing on Branch Creek.

E. Barker and party hold a claim on Branch Creek, but have not yet constructed the water-race or procured sluicing plant.

Courtney and Fleming are still sluicing on Criffel Face.

There are three dredges at work in this district, two of which are worked by O'Brien's application of water-power for dredges.

Luggate.

There are several sluicing claims in the locality which are worked on a small scale.

Dredging.—The Albertown dredge, owned and worked by working shareholders with moderate means, is the only dredge at work in this locality. Knewstubb's Upper Clutha dredge lies sunk above Luggate Ferry

Matatapu.

McLaren Bros.' Hydraulic Sluicing and Elevating Claim.—Sluicing operations are still being carried on in this claim with a moderate degree of success.

Arrowtown.

Fealey and Hay Bros.' Sluicing Claim, Arrow River.—This is the only claim at work in the neighbourhood of the township. It is worked on Smith's jet principle of elevating material.

Arrow River.

Arrow Falls Sluicing Company (J. A. Millar, Manager).—Area of claim 25 acres. The work entailed in opening out this claim was of considerable magnitude, but operations have been carried beyond the gorge into the flat and steady work may now be expected. Progress is, however, retarded by occasional floods in the Arrow River. Seven men are employed.

Bremer's Claim, Bracken's Gully.—This claim has been worked throughout the year on behalf of an Arrowtown syndicate, which had purchased it. The claim has an area of 2 acres, and is worked by ground-sluicing.

Robert S. Cooper and party, Bracken's Gully.—A ground-sluicing claim of 3 acres.

Peter Henderson and party, Bracken's Gully.—A ground-sluicing claim of 4 acres.

In the Arrowtown district there are a number of fossickers on Whitechapel Flat and at the junction of the Arrow and Kawarau Rivers.

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Macetown.

Anderson and party, Eight-mile Hill.—Three men are employed in this sluicing claim, from which fair returns are obtained.

William Reid and party, Red Hill.—This is a ground-sluicing claim on the terrace above the Arrow River.

There are still a number of fossickers, principally Chinese, on the creeks and in the gullies around this district.

Glenorchy.

Valpy Bros.' Claim, Glenorchy (Head of Lake Wakitipu).—Three men find employment in this hydraulic-sluicing and elevating claim.

There are several other small claimholders in this district.

Queenstown.

Reid and Lee, Twelve-mile, Lake Wakatipu.—Sluicing operations have been conducted on the usual lines during the year.

Arthur's Point.

Arthur's Point Hydraulic Sluicing and Elevating Company, Arthur's Point, Shotover River.—This claim is now being worked by James McMullan and party. Area of claim, 10 acres. Five men are employed.

Dredging.—The Wakatipu Gold-dredging Company's dredge (late New Prince Arthur) was in operation during the year, but sunk while lying idle during a flood in the Shotover River.

Lower Shotover.

James Tyrell and others, Kawarau River.—Sluicing and elevating operations have been carried on during the year, but have been hampered by the heavy drainage from the Kawarau River. As the claim is considered a payable one, a proposal is under consideration to abandon sluicing in favour of dredging.

Moonlight.

Moonlight Sluicing Claims Nos. 1 and 2, Moonlight Creek, Queenstown.—These claims are now being worked on a small scale by tributing parties.

There are a few fossickers in this neighbourhood.

Shotover River.

The various sluicing claims in this district continue to be worked, with payable results.

Reiseler and McCormack, below Long Gully.—This claim is situated in the bed of the Shotover River, and is worked during the winter season when the river is low.

Ward and Smith, below Long Gully.—This is also a claim in the bed of the Shotover River, worked by the Smith's jet-pump system of hydraulicking.

Thompson and Robertson.—The proprietors of this claim have persevered for several years in an attempt to work the bed of the Shotover River, and, during the season, were well rewarded for their efforts. An exceptionally rich patch of gold-bearing wash was struck, yielding close upon 1,000 oz. of gold.

Coulter, Son, and Sainsbury, continue to work their claim below Deep Creek.

Boomerang Terrace.

Three Chinamen are sluicing here.

Blue Jacket Sluicing Claim, Deep Creek (J. S. Collins).—Three men are employed in this claim sluicing terrace ground during the summer months. In the winter (when the Shotover River is low) the bed of the river is worked by Smith's jet-pump principle.

E. Sainsbury has a small sluicing claim at Maori Point.

Davis's Sluicing Claim, Stoney Creek Terrace, Skipper's (W. L. Davis, Owner).—Extensive ground-sluicing operations are still carried on in this claim, in which four men are employed.

Robert Johnstone's Sluicing Claim, Pleasant Creek Terrace, Skipper's.—The owner of this claim does not operate on an extensive scale.

Sorrenson and Henderson, Pleasant Creek Terrace, Skipper's.—Two men are engaged driving out the wash in this terrace.

Skipper's Sluicing Company, Londonderry Terrace, Skipper's (John Corbett, Manager).—Sluicing has been steadily carried on in this claim throughout the season. The material treated is rough, but a considerable amount is sluiced away, with satisfactory results. The tail-race tunnel continues working satisfactorily.

Stevenson and Aspinall's Sluicing Claim, Skipper's Point.—The owners of this claim continued to work with a poor water-supply, but still obtain payable returns.

Dredging.—The Maori Point dredge continued operations during the year, although hindered by the high state of the river and the numerous smaller floods to which the Shotover River is liable.

Upper Shotover River.

Smith and Sons' River-bed Claim, above Skipper's Point.—During the summer months work in this claim is confined to ground-sluicing on the terrace section. In common with the other river claims in this district, the bed of the river is worked by Smith's jet-pump system of hydraulicking during the winter months when the river is low.

Rogers and Johnston have transferred their mining plant to a claim on Jenkins Terrace.

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Peet and Helms continue working the bed of the river at the foot of Ballarat Hill, with satisfactory results.

William Palmer, Shotover, has a small ground-sluicing claim.

Monk's Terrace Sluicing Claim, Upper Shotover (J. Lynch, Manager).—Ground-sluicing operations are continued on this terrace during the sluicing season. Four men are employed.

O. Strahle has a river-bed claim which is worked by Smith's jet-pump system.

Monk's Creek Syndicate, Upper Shotover.—Sluicing has not yet been commenced on this claim.

Sandhills Hydraulic Company, Upper Shotover (Hamilton and party).— An expensive plant was procured, and a water-supply brought in to work a river-beach claim. Four men are employed.

Davis Bros.' Claim, Upper Shotover.—This plant is still at work on Guy's Terrace. Three men employed.

William McLeod works a small elevating claim on Sloan's Flat, with moderate success.

Sunny Terrace Sluicing Claim, Upper Shotover.—The Muddy Creek Sluicing Claim was purchased by Mr. H. Mills during the year. The new owner started to develop it on an extensive scale. A large amount of material was sluiced away with a good body of water, but the returns obtained were not satisfactory. Five men were employed.

R. Anderson continues to work his sluicing claim on Muddy Creek Terrace, Upper Shotover.

Dwan, Costelloe, and Cummings, Muddy Creek Terrace.—Three men continue to find employment in this ground-sluicing claim.

Southland.

Nevis.

Our Mutual Friend Hydraulic Sluicing and Elevating Company (Masters and Adie Bros.).—This claim continues to be worked on the usual lines with moderate success. Four men are employed.

Robertson and party's Hydraulic Sluicing Claim.—Four men find employment in this privately owned claim, from which payable returns are obtained.

Keep-it-dark Gold-mining Company, Galvin's Terrace.—This property has been idle throughout the year.

Glenore Claim (Rip and Tear), Nevis.—As no returns were obtained for money expended and work done, this claim is closed down.

Thomas Shaw, Lower Nevis, has a ground-sluicing claim of 2 acres.

Robert Ritchie, Lower Nevis, continues to work his claim by ground-sluicing.

Dredging.—The five dredges in operation in this district continue to work during the summer season, with satisfactory yields of gold.

Upper Nevis.

Upper Nevis Sluicing Claim, Cinnabar Flat.—Owing to the poor water-supply, operations are not carried on continuously in this claim.

Joe Parks's Hydraulic Sluicing Claim, Upper Nevis.—The results obtained from this sluicing claim are said to be satisfactory, and the work is carried on in the usual way.

Edward McMillan's Sluicing Claim, Cameron's Gully, Upper Nevis.—This claim is worked by hydraulic sluicing and elevating. Four men are employed.

McDonald's Hydraulic Sluicing and Elevating Claim, Upper Nevis (R. McDonald, Manager).—Mining during the past season has been profitably carried on in the shallow ground. Six men are employed.

O'Connell and Graham's Hydraulic Sluicing Claim, Upper Nevis.—This privately owned claim continues to yield satisfactory returns. Operations are conducted on good lines. Seven men are employed.

Undaunted Sluicing Claim, Upper Nevis (R. Kitto, Manager).—A new water-race was brought in, and the sluicing plant transferred to work the upper flat, on which sluicing operations were commenced during the past season. It has been found necessary to still further improve the water-supply.

Dredging.—There is one dredge here, but it has been idle throughout the year.

Nokomai.

Lion Hydraulic Sluicing Claim (Hannah P. Soper, Owner, Garston).—The original company went into liquidation, and the claim, plant, and water-rights were purchased by Mrs. Soper. Under the new ownership, shallow ground has been worked, but it is intended to attack the deep ground in the near future. In view of this, the water-race and sluicing plant are being put in good working-order. Six men are employed.

Nokomai No. 1 Sluicing Claim, Nokomai (J. Robertson, Manager).—There is nothing fresh to report in connection with this claim, which continues to be steadily worked on good lines, and to give good results.

Nokomai No. 2 Sluicing Claim, Nokomai.—The ground worked in this claim is shallow and very rough, but with the improved water-supply, a large quantity of material is sluiced away during the season, and satisfactory results are obtained.

J. Copland continues to work his terrace claim with overflow water from the Nokomai water-race.

Victoria Gold-mining Company (James France, Manager).—This claim is situated in Victoria Gully, a tributary of the Nokomai Creek. Under the present ownership, several improvements have been effected in connection with the water-supply. Three men are employed.

Waikaia.

Alluvial mining by means of gold-dredging has quite recently been revived in Waikaia Valley. Two dredges are at work near the township and eleven lower down the valley. Gold won by dredging had exceeded the returns usually obtained by land dredges in other districts; as high as 100 oz. of

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gold per week of 140 hours having been recovered by several of the dredges on different occasions. The majority of the claims had been reliably prospected prior to expenditure on dredges. Several properties are now being prospected with a view to their being taken up for dredging if proved payable.

Argyle Hydraulic Sluicing Company, Winding Creek (J. Stewart, Manager).—During the year all sluicing operations were suspended and a dredge, to be worked by water-power, is being erected on the claim.

Winding Creek Hydraulic Sluicing Claim, Waikaia.—This property has been purchased by the Round Hill Gold-mining Company, Southland.

Gow's Creek, Waikaia.—There are a few fossickers in this locality.

Upper Waikaia and Whitecombe Districts.—There are a few small claimholders scattered over this district.

Gore.

Alluvial mining in and around this district is confined to dredging. There are two dredges on the Mataura River, near Gore, one of which is at work. The total number of dredges on the Waikaka dredging-field is twenty-nine, of which number twenty-seven are in active operation, with payable results.

Three new dredges were brought into the district and erected during the year. Powerful up-to-date machines are being placed on this field, special attention being paid to providing large bucket-capacity with good delivery. This was rendered necessary by the heavy nature of the clay overlying the auriferous washdirt.

Ibbotson's dredge is at work on the Chatton Mining Reserve.

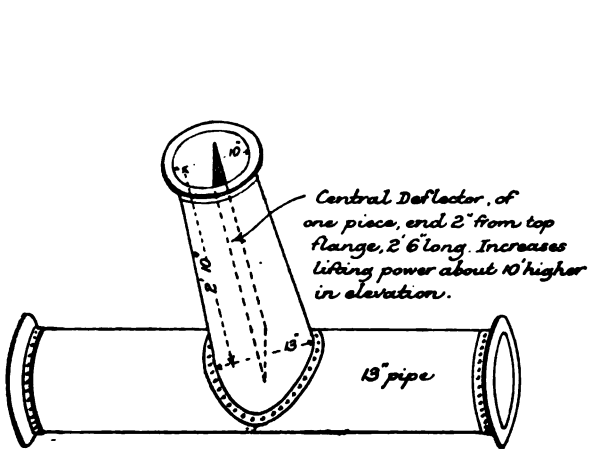
In the Charlton Valley five dredges have operated during the year successfully. As in the Waikaka field the heavy clay overlying the auriferous washdirt—sometimes to a depth of 10 ft.—hinders rapid working of the ground, and is no doubt responsible for loss of gold.

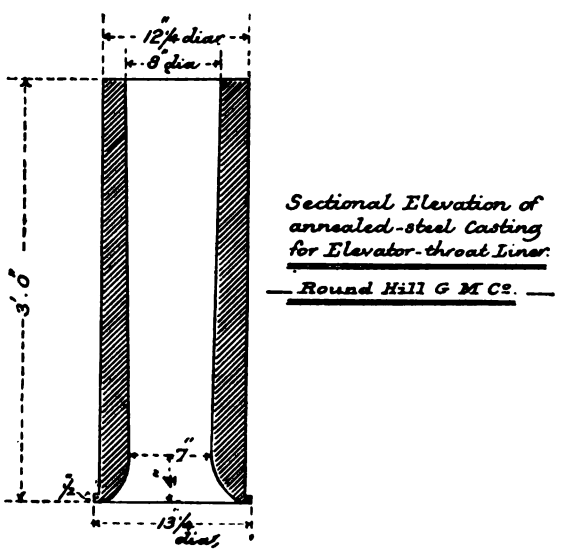
There are five dredges operating in the Waimumu Valley, with satisfactory results. One dredge has been idle throughout the year, and one has been removed from the locality.

Round Hill.

Round Hill Gold-mining Company (A. Reynolds, General Manager; F. Hart, Mine-manager).—Operations are being steadily conducted. Heavy preliminary works having been successfully overcome, the several claims are now fairly well opened out, and the company has recently been placed on the dividend-paying list. A large paddock of about 8 acres has been sunk in the flat and the Ourawera Stream forced over on to worked ground, thus liberating an area on the southern side of the stream of about 60 acres of virgin ground, which is all available to the present plant. There are two elevators in the paddock, No. 1 elevating 67 ft. 6 in., main ripple run doubled, 70 ft. in length from tip-box, discharging on to side tables doubled, each 26 ft. by 18 ft.; forty-eight mats, twenty-four on each side, six pens, and four mats to a pen; then 36 ft. of tail ripples. No 2 elevating 68 ft. 6 in. The tables are a duplicate of No. 1, except that the double run of ripples from tip-box to side tables is 130 ft. in length. At each lift there are a double set of pipes used as pump or dirt pipes alternately as the water suits. The pipes are expanded from 13 in. diameter at the bottom to 15 in. to 18 in. at the top, and were made in the blacksmith's shop on the ground. Elevator jet 4 in. diameter working at 120 lb. pressure. A new service pipe-line, 70 chains in length, has been laid down, 42 chains 27 in. diameter, and the balance, 28 chains 26 in. diameter, leading from Port's race to the Ourawera. The claim is in good working-order and improving, there being more room in the paddock for tailings-dump. The old bed of the Ourawera Stream is bared and the shaft of the Sludge Gold-mining Company is exposed to view, containing steam pumping-pipes and dredge bucket-ladder of an abortive attempt to win the precious metal by that method with the aid of steam. Average depth of ground, 40 ft.; quantity of material treated for the year, 522,720 cubic yards; average value of ground worked, £1,000 per acre; value of gold, £4 per ounce; cost of winning gold, £2 17s. 6d. per ounce; cost per yard in wages, including maintenance of water-races, repairs to plant, working-expenses, management, and salaries, 2d. per cubic yard.

Sketches by Mr. A. Reynolds showing improved hydraulic elevator "T" piece with centre deflector; also elevator throat-liner as adopted and used by the Round Hill Mining Company, and described in my report. (See page 81 C.–3, 1904.)


Central Deflector, of one piece, end 2" from top flange, 2' 6" long. Increases lifting power about 10' higher in elevation.
19" pipe



Sectional Elevation of annealed-steel Casting for Elevator-throat Liner.
— Round Hill G M Co. —

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Ourawera Gold-mining Company (James Coulling, Mine-manager).—Hydraulic sluicing and elevating: Good results have been obtained for the year's work, and dividends are declared regularly.

Orepuki Goldfields.

Gold-mining continues to employ practically the same number of men as for several years past. As the claims in the immediate neighbourhood of the township are becoming worked out the attention of the miners is being diverted in the direction of Pahia and Round Hill. The surface of the country is heavily overgrown by forest, which renders prospecting more or less difficult, but as the limited supply of water becomes available the auriferous nature of the alluvial surface is becoming gradually recognised. It is to be noted that gold to the value of 1,000 oz. per acre has been recovered on this field.

Beach-combing.—Sea-beach claims have proved more than usually remunerative during the last year.

Waiau River.

Several small sluicing claims have been maintained on the river-terraces lying to the west of the Waiau River mouth. Small prospecting parties have ventured from time to time further west, but the difficulties of travelling and working in dense bush, together with the intermittent nature of food-supplies, have militated against success.

Two men reported the discovery of a rich quartz reef in the bush, but proved themselves unable to locate the reef on a second attempt.

Stewart Island.

Treseder and Goodger, McFadyen's Creek, Pegasus.—Ground-sluicing for tin and gold in the old creek-bed in the terraces.

Fraser and Ford, Pegasus.—Ground-sluicing for tin and gold in the terraces of a branch of McArthur's Creek.

Preservation Inlet and South-west Coast of Otago.

A few parties are engaged ground-sluicing upon the mainland and on Coal Island, with varying results.

ACCIDENTS.

HYDRAULIC AND ALLUVIAL MINES.

Fatal.

6/4/1904.—Joseph Walker, fossicker, Waitahuna, was found buried under a fall of earth in his claim.

12/4/1904.—John Lütgens, miner, Norwegian Claim, Waitahuna Gully, was killed by premature explosion of powder while stemming a charge with an iron scraper as tamping-bar.

11/6/1904.—Lye Mow, miner, Fitzmaurice and Smith's Sluicing Claim, Round Hill, was killed by fall of earth from side of tail-race.

24/9/1904.—George Taylor and Andrew McNab, miners, Roxburgh Amalgamated Sluicing and Mining Company's Claim, Roxburgh, were killed by a fall of rock while assisting to repair a break in the water-race.

Non-fatal.

12/4/1904.—John Larsen, miner, Norwegian Claim, Waitahuna Gully, was severely burnt about the face by premature explosion of powder while stemming a charge with an iron scraper as tamping-bar.

22/10/1904.—John Mellor, nozzle-man, Undaunted Gold-mining Company's Claim, Matakanui, sustained fracture of two ribs by fall of clay from the face.

22/10/1904.—William Kenny, sluicer, Scandinavian Water-race Company's Claim, St. Bathan's, while inserting scrub behind the elevator uptake pipes, fell a distance of 20 ft. into the elevator well-hole, and sustained fracture of two ribs.

GOLD-DREDGING.

At the end of December, 1903, the total number of dredges in Otago and Southland was 200. At the end of December, 1904, this number had dropped to 184. During the year there was a decrease of 6 working dredges in Otago, and an increase of 3 working dredges in Southland. The total number of dredges in Otago was lessened by 13. Of this number, 10 were dismantled and not re-erected. One was removed to the West Coast, 1 to Victoria, and another to Southland. In Southland 2 dredges were dismantled and not re-erected. On account of the number of dredges for sale the building of new dredges in the Otago and Southland Districts has been at a complete standstill. A number of registered companies which had been in operation part of the year were liquidated, and, in some cases, the dredges were started to work again by new companies. In other cases the dredges were dismantled after sale and not re-erected, or were sold for removal to other claims.

Improvements in dredges have been of a minor nature, chiefly relating to improvements in general practice. An appliance to prevent the loss of the buckets and links in case of the pins breaking has been patented by Mr. C. L. Watt, consulting engineer, Dunedin. O'Brien's application of hydraulic power to dredges has proved successful in districts where water is available under sufficient pressure, and modifications of the application of this system are being adopted. Johnson's submerged-jet principle of dredging, or, rather, elevating, was tried and proved capable of practical results, but has not been in operation throughout the year.

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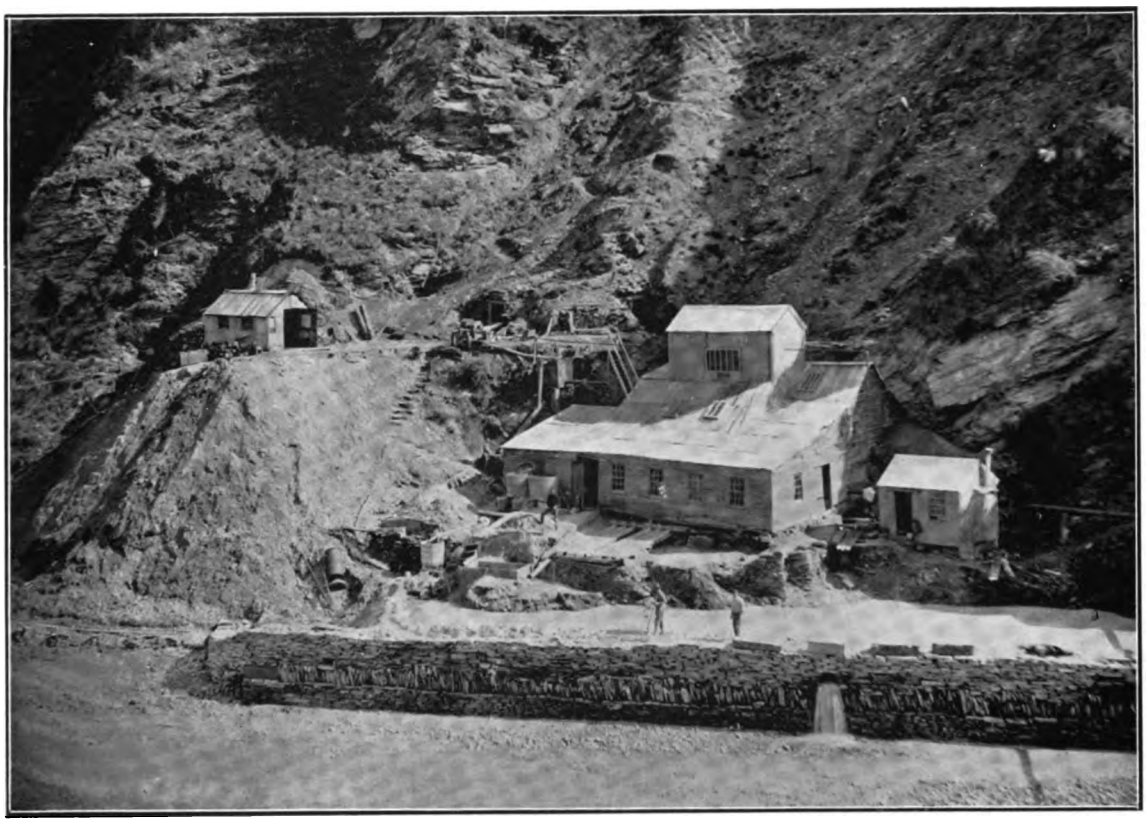

SHOTOVER QUARTZ MINE AND BATTERY, SKIPPER'S POINT, OTAGO.

MACGEORGE BROS.' NO. 1 DREDGE, WAIKAKA, SHOWING EXTENDED SLUICE-BOX. THE HEAVY MATERIALS ARE SEEN FALLING AT THE FIRST DROP, WHILE THE FINE MATERIALS ARE BEING CARRIED OUT AND SPREAD ON THE SURFACE.

[*See also Report of Mr. Warden Cruickshank.*

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Working Dredges inspected.

[Note.—The owners of all dredges having an asterisk (*) in front of their names have been served with notices that the rivers on which the dredges are working are deep and swift-flowing within the meaning of the Act, and that clause 2 of Regulation 83 of "The Mining Act, 1898," applies thereto.]

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
Otago.				
Clutha River.				
*New Paul's Beach, below Beaumont	New Paul's Beach Gold-dredging Company	John Tyson ..	Dredge and life-saving appliances in good order	8/4/04
		John Herbert ..	" "	7/11/04
*New Golden Gravel, Beaumont	William Adams and party ..	Louis Johnston ..	" "	8/4/04
*Champion, Beaumont ..	Champion Gold-dredging and Hydraulic-sluicing Company	..	Dredge being removed to Waikaka	8/4/04
*Otago No. 2, below Island Block	Otago Gold-dredging Company ..	George Bennet ..	Dredge and life-saving appliances in good order	5/7/04
Golden Run, Miller's Flat ..	Golden Run Gold-dredging Company	H. Coutts ..	" "	9/4/04
		C. Monson ..	" "	8/11/04
*Pride of Clutha No. 2, Miller's Flat	Pringle and party	John Tough ..	Main driving-belts to be guarded; light line required at stern	9/4/04
			Dredge undergoing repairs	8/11/04
*Pride of Clutha No. 1, Miller's Flat	Pringle and party	..	Dredge idle throughout the year	9/4/04
*Golden Gate, Miller's Flat ..	Golden Gate Gold-dredging Company	D. Ballintyne ..	Dredge and life-saving appliances in good order	9/4/04
			" "	8/11/04
*Otago No. 1, Miller's Flat ..	Otago Gold-dredging Company ..	E. Kitto ..	" "	9/4/04
*Old Otago No. 1, Miller's Flat	" ..	..	Dredge idle throughout the year	28/9/04
*Golden Treasure, Miller's Flat	Golden Treasure Gold-dredging Company	T. Cornish ..	Dredge and life-saving appliances in good order	26/5/04
	" ..	" ..	" "	8/7/04
*Majestic, Ettrick	Majestic Gold-dredging Company ..	John Herbert ..	Dredge idle	9/4/04
		D. Mitchell ..	Lifebuoys to be re-covered; bows to be fenced	9/7/04
		Alex. Johnston ..	Dredge and life-saving appliances in good order	9/11/04
*Golden Bed, Ettrick ..	Golden Bed Gold-dredging Company	A. E. Maitland ..	" "	26/5/04
	" ..	" ..	" "	8/7/04
*Ettrick, Ettrick	Ettrick Steam Gold-dredging Company	G. Thompson ..	" "	6/7/04
*Grogan and party, Ettrick ..	Grogan and party	J. A. Wallace ..	This party are shifting Old Golden Treasure Dredge to Gibb's Beach Claim. Several planks require to be renewed in starboard pontoon	26/5/04
		" ..	Dredge and life-saving appliances in good order	27/9/04
*Gold King No. 1, Dumbarton Rock	Joseph Sparrow	J. McLean ..	Dredge shifting; I could not get on board	10/4/04
			Dredge and life-saving appliances in good order	28/9/04
*Gold King No. 2 (late Endeavour) Dumbarton Rock	Joseph Sparrow	G. Magnus ..	All bow-fencing to be renewed; screen-driving gear and main engine fly-wheel to be guarded; winch pinions to be covered	10/4/04
			Dredge and life-saving appliances in good order	6/7/04
*Roxburgh Jubilee, Roxburgh	New Roxburgh Jubilee Gold-dredging Company	E. Butler ..	" "	11/4/04
		— Kitto	" "	28/9/04
*New Teviot, Roxburgh ..	New Teviot Gold-dredging Company (Joseph Sparrow)	H. Brice ..	Screen-driving gear to be guarded; railing on bows to be renewed	11/4/04
		D. Mitchell ..	Dredge and life-saving appliances in good order	11/4/04
*Lady Roxburgh, Roxburgh ..	Lady Roxburgh Gold-dredging Company	A. P. Bremner ..	" "	28/9/04
	" ..	" ..	" "	28/9/04
*Molyneux Kohinoor, Coal Creek Flat	Molyneux Kohinoor Gold-dredging Company	A. Rennie ..	Dredge and life-saving appliances in fair order	11/4/04
		" ..	" "	28/9/04

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WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
CLUTHA RIVER—*continued.*				
Coal Creek to Alexandra Gorge.				
*Fourteen-mile Beach No. 1 ..	New Fourteen-mile Beach Gold-dredging Company (F. W. Payne)	..	These pontoons were wrecked while being shifted to Coal Creek	7/7/04
			Arrangements being made to secure them from breaking away..	29/9/04
*New Fourteen-mile Beach ..	New Fourteen-mile Beach Gold-dredging Company	G. P. Blue ..	Railing required on stern and bows; main belting to be guarded	8/7/04
*New Golden River	New Golden River Gold-dredging Company	D. Murray ..	Dredge idle	8/7/04
*Molyneux Falls	Molyneux Falls Gold-dredging Company	M. Harliwich ..	Dredge and life-saving appliances in good order	8/7/04
*New River, Molyneux ..	New River Molyneux Gold-dredging Company	..	Dredge idle on account of high river	11/7/04
*Davis Bend No. 1	Davis Bend Gold-dredging Company	..	,, ...	11/7/04
*New Bendigo	New Bendigo Gold-dredging Company	P. McVicar ..	,, ...	11/7/04
*New First Chance	New First Chance Gold-dredging Company	S. Hoy	Dredge and life-saving appliances in good order	11/7/04
*Sailor's Bend	Sailor's Bend Gold-dredging Company	John Dewar ..	,, ,, ...	11/7/04
*Manuherikia	Manuherikia Gold-dredging Company	L. Anderson ..	,, ,, ...	11/7/04
*Moa No. 1	Clyde Gold-dredging Company ..	..	Dredge being dismantled	28/5/04
*Moa No. 2	,, ..	W. Nicholson ..	Dredge and life-saving appliances in good order	28/5/04
Alexandra.				
*Alexandra Lead	Alexandra Lead Gold-dredging Company	G. Poulter ..	Dredge and life-saving appliances in good order	3/3/04
	,, ..	,, ..	,, ,, ...	31/5/04
Molyneux Hydraulic	Molyneux Hydraulic Gold-dredging Company	C. Simonsen ..	Dredge idle	3/3/04
			Dredge and life-saving appliances in good order	31/5 04
*Alexandra Eureka No. 1 ..	Alexandra Eureka Gold-dredging Company	C. Curno ..	Railing on bows to be renewed; second boat to be equipped with light line	12/4/04
*Alexandra Eureka No. 2 ..	Ditto	N. Bradley ..	Dredge and life-saving appliances in good order	12/4/04
New Golden Beach	New Golden Beach Gold-dredging Company	W. Bringans ..	Boathooks and light lines required; railing on bows to be renewed; boat to be equipped with life-saving appliances	12/4/04
		,, ..	Dredge and life-saving appliances in good order	1/6/04
		,, ..	,, ,, ...	3/10/04
*Ngapara No. 1	Ngapara Gold-dredging Company..	M. G. Scott ..	,, ,, ...	13/4/04
*Ngapara Extended	,, ..	C. Allen	,, ,, ...	13/4/04
*Enterprise No. 1	Enterprise Gold-dredging Company	S. J. Luke ..	,, ,, ...	3/3/04
			,, ,, ...	31/5/04
*Enterprise No. 2	Enterprise Gold-dredging Company	G. R. McGregor ..	,, ,, ...	13/4/04
Earnscleugh No. 3	Earnscleugh Gold-dredging Company	C. Weaver ..	New dredge; not yet equipped with life-saving appliances, nor machinery efficiently guarded	12/4/04
			Dredge and life-saving appliances in good order	3/10/04
Earnscleugh No. 1	Ditto	J. Fouhy.. ..	,, fair order	12/4/04
			,, good order	3/10/04

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WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
CLUTHA RIVER—*continued.*				
Alexandra—continued.				
Earnscleugh No. 2	Earnscleugh Gold-dredging Company	J. Fouhy	Set-screw on winch shaft to be guarded; hand-rails required on well-hole and gangway	12/4/04
			Dredge and life-saving appliances in good order	3/10/04
*Chicago	Chicago Gold-dredging Company	F. Williams	" "	3/3/04
			" "	31/5/04
Glasgow	Sandy Point Gold-dredging Company	A. Steel	" "	12/7/04
*Perseverance No. 1	Perseverance Gold-dredging Company	S. Cameron	" "	21/1/04
*Perseverance No. 2	Ditto	"	" "	21/1/04
*New Perseverance No. 1	New Perseverance Gold-dredging Company	James E. Carrol	Dredge undergoing extensive repairs	12/7/04
*New Perseverance No. 2	Ditto	J. R. Baker	"	12/7/04
*Dunstan Lead	Dunstan Lead Gold-dredging Company	D. Bringans	Dredge and life-saving appliances in good order	5/10/04
Below Clyde.				
*Matau	Matau Gold-dredging Company	H. P. Saunders	Dredge idle	2/6/04
			Dredge and life-saving appliances in good order	5/10/04
*Unity	Unity Gold-dredging Company	T. Barry	Screen-driving gear to be guarded	5/10/04
At Clyde.				
*Vincent	Clutha Gold-dredging Company	John Bourke	Dredge and life-saving appliances in good order	5/10/04
Clyde to Cromwell Gorge.				
*Davis Bend No. 2	Davis Bend Gold-dredging Company	Caretaker	Dredge idle	2/6/04
			"	7/10/04
*Monte Christo	New Monte Christo Gold-dredging Company	E. Eaton	Dredge and life-saving appliances in good order	1/6/04
			Dredge idle	7/10/04
*New Halfway House	New Halfway House Gold-dredging Company	J. Sawle	Fencing on bows to be renewed	2/6/04
			Visited dredge in connection with fatal accident to James King, winchman, 31/10/04, particulars of which appear on list appended	
*New Alpine Consols	New Alpine Consols Gold-dreding Company	George Goodger	Second boat to be equipped with life-saving appliances; foot-planks required about the friction gear; railing required side of pontoon	2/6/04
			Dredge idle	7/10/04
*Riley's Beach	Riley's Beach Gold-dredging Company	M. Murray	Dredge and life-saving appliances in good order	7/10/04
*Alpine No. 2	Alpine No. 2 Gold-dredging Company	A. Johnston	" "	2/6/04
			Dredge idle	7/10/04
*Hartley and Riley	Hartley and Riley Gold-dredging Company	George McLay	Two lifebuoys to be repaired; part of bow-fencing to be renewed	3/6/04
			Dredge and life-saving appliances in good order	7/10/04
*Junction Electric No. 2	Junction Electric Gold-dredging Company	A. Ross	" "	3/6/04
Above Cromwell.				
Point d'Or	Point d'Or Gold-dredging Company		Dismantling this dredge for removal	1/9/04

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WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks	Dates of Visits.
CLUTHA RIVER—*continued.*				
Lowburn.				
*Rise and Shine No. 1	Rise and Shine Gold-dredging Company	John C. Ray	Dredge and life-saving appliances in good order	3/6/04
*Rise and Shine No. 2	Ditto	Thomas Keen	Screen-driving gear to be guarded; all railings in pontoons to be renewed	21/1/04
			Stern-railing to be renewed; well-hole fencing to be secured; second boat to be equipped with life-saving appliances	3/6/04
		N. P. Kloogh	Dredge and life-saving appliances in good order	7/10/04
*Rising Sun	Rising Sun Gold-dredging Company	William Kane	Dredge undergoing repairs	4/6/04
			Dredge and life-saving appliances in good order	7/10/04
*Revival	Revival Gold-dredging Company	F. M. Kitto	" "	4/6/04
*Sunshine	Sunshine Gold-dredging Company		Dredge idle	4/6/04
*Sunshine	Clutha River Gold-dredging Company		Dredge still idle (have leased Sunshine dredge)	10/10/04
*New Royal Maori	New Royal Maori Gold-dredging Company	R. A. Denniston	New dredge; not fully equipped with life-saving appliances, nor machinery efficiently guarded	4/6/04
Luggate.				
*Upper Clutha	Knewstubb Bros.		Dredge sunk above Luggate Punt	10/10/04
Albertown.				
*Albertown	Albertown Gold-dredging Syndicate	H. Raitt	Dredge and life-saving appliances in good order	10/10/04
KAWARAU RIVER.				
Above Cromwell.				
*Junction Electric No. 1	Junction Electric Gold-dredging Company	J. Richmond	Dredge and life-saving appliances in good order	4/6/04
*Cromwell No. 1	Cromwell Gold-dredging Company	N. P. Kloogh	" "	6/6/04
			Dredge idle	11/10/04
*Cromwell No. 2	"	F. Woodhouse	Dredge and life-saving appliances in good order	6/6/04
			Dredge idle	11/10/04
*Lady Ranfurly	Electric Gold-dredging Company	G. C. Troy	Dredge and life-saving appliances in good order	12/7/04
*Electric No. 2	"	A. Hedley	" "	12/7/04
*Voltaic	Voltaic Gold-dredging Company	J. Bourke	" "	7/6/04
			Dismantling dredge for removal	30/11/04
Grand Junction No. 2	W. Reid, Macetown		The owner has been instructed to remove these pontoons from the river	7/6/04
			Pontoons entirely removed from the river	12/10/04
*Waitiri	Aitken and party	E. McDonald	Dredge and life-saving appliances in good order	7/6/04
*Grand Junction No. 1	James Horn, Bannockburn	Thomas Hogg	Dredge and life-saving appliances in fair order	12/7/04
			Dredge idle	12/10/04
Victoria Bridge.				
*Kawarau Consolidated	Kawarau Consolidated Gold-dredging Company (Aitken and party)		Pontoons moored in safe position	12/7/04
			Pontoons purchased to be dismantled	12/10/04
Gibbston.				
Junction Waikaka	Cotter and party, Arrowtown		The owners have received instructions to remove these pontoons from the river	8/6/04
			Pontoons entirely removed from the river	13/10/04
*United Morven	United Morven Gold-dredging Company		Pontoons stranded on the beach in safe position	13/10/04
Gibbston	F. W. Payne		Dismantling dredge for removal to West Coast	12/7/04

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WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
SHOTOVER RIVER.				
*New Prince Arthur	New Prince Arthur Gold-dredging Company	J. Sanders ..	Visited in connection with drowning fatality on 29th February, 1904. Donald Hunter, fireman, lost his life while attempting to go from the dredge to the shore on the coaling-line	2/3/04
			All life-belts to be repaired; suitable second boat to be procured	19/5/04
*Wakatipu (late New Prince Arthur)	Wakatipu Gold-dredging Company	W. Kitto ..	Dredge sunk	24/11/04
*Maori Point	Maori Point Gold-dredging Company	Thomas Hoskins ..	Dredge and life-saving appliances in good order	24/11/04
Cardrona Valley.				
Lone Star	Lone Star Gold-dredging Company	C. F. Melton ..	Dredge and life-saving appliances in good order	18/5/04
La Franchi	New La Franchi Gold-dredging Company	D. Craig	Visited in connection with drowning fatality on 14th May, 1904. Frank Duthie, cadet, lost his life through falling into the dredge-paddock	18/5/04
Sunbeam	Sasse and party	William Sasse ..	Dredge worked by water-power; life-saving appliances in fair order	18/5/04
NEVIS RIVER.				
Nevis Crossing	Nevis Crossing Gold-dredging Company	Thomas Hogg ..	Dredge and life-saving appliances in good order	1/12/04
Crewe No. 1	Crewe Gold-dredging Company ..	William Weir ..	„ „	1/12/04
New Era	New Era Gold-dredging Company ..	George Omond ..	„ „	1/12/04
Ngapara No. 2	Ngapara Gold-dredging Company ..	Alexander Gunion ..	„ „	1/12/04
Ngapara No. 3	Ngapara No. 3 Gold-dredging Company	C. S. Fleming ..	Dredge undergoing extensive reparis	1/12/04
Crewe No. 2	Crewe Gold-dredging Company ..	..	Dredge idle	2/12/04
MANUHERIKIA RIVER.				
Chatto Creek	Ben Davis, Alexandra	..	Dredge idle	31/10/04
Morning Star	Morning Star Gold-dredging Company	S. Cameron ..	Dredge undergoing repairs	31/5/04
Olrig	Olrig Gold-dredging Company ..	E. A. Johnston ..	Dredge and life-saving appliances in good order	20/4/04
Coronation	Coronation Gold-dredging Company	..	Dredge idle (since sold to Lady Annie Gold-dredging Syndicate)	20/4/04
FRASER RIVER.				
Loch Lomond	Loch Lomond Gold-dredging Company	A. McLean ..	Dredge and life-saving oppliances in good order	6/10/04
IDA VALLEY.				
Cairntrodlie, Poolburn ..	Cairntrodlie Gold-dredging Company	H. Mercer ..	Dredge and life-saving appliances in fair order	17/3/04
NASEBY.				
Roberts's Naumai, Upper Kyeburn	Roberts's Naumai Gold-dredging Company	S. Beer	Life-saving appliances not in good order; machinery not efficiently guarded	24/3/04
			Dredge and life-saving appliances in fair order	25/3/04
TUAPEKA.				
Taniwha	Taniwha Gold-dredging Company ..	A. N. Wakefield ..	Dredge and life-saving appliances in good order	24/9/04
Lawrence, Tuapeka Flat ..	Lawrence Gold-dredging Company	S. McStay ..	Dredge being dismantled	24/9/04
Reliance, Tuapeka Flat ..	Reliance Gold-dredging Company ..	J. Hughes ..	Dredge idle	24/9/04
Tuapeka, Evans Flat ..	Tuapeka Gold-dredging Company ..	G. Montgomery ..	Dredge being dismantled	24/9/04
Gabriel No. 1, Tuapeka Flat ..	Gabriel Gold-dredging Company ..	John Harris ..	Bow-fencing to be renewed; fly-wheel to be guarded	24/9/04
Happy Valley, Weatherstone's ..	Happy Valley Gold-dredging Company	..	Dredge and life-saving appliances in good order	24/9/04

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WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
WAITAHUNA.				
Havelock	Havelock Gold-dredging Company	W. Rowe	Dredge and life-saving appliances in good order	7/4/04
Gordon	Gordon Gold-dredging Company	T. Thompson	,, ,,	7/4/04
Manuka	A. C. Broad	..	Dredge being dismantled	7/4/04
Imperial	Imperial Gold-dredging Company	J. S. Sinclair	Light lines and boathooks required	7/4/04
Waitahuna Gully	Argyle Gold-dredging and Hydraulic-sluicing Company	..	Dredge being removed to Waikaia	7/4/04
GLENORE.				
Gold Bank	Gold Bank Gold-dredging Company	A. Thomas	Dredge and life-saving appliances in good order	24/5/04
Stirling	Stirling Gold-dredging Company	J. Nelson	,, ,,	24/5/04
WAIPORI.				
Quilter and party	Quilter and party	W. Carr	Boathooks and light lines required	21/9/04
Johnston's Submerged Jet	Bakery Flat Sluicing Company	J. T. Johnston	Dredge idle	21/9/04
Upper Waipori	Upper Waipori Gold-dredging Company	C. Haggitt	Dredge and life-saving appliances in good order	21/9/04
Jutland Hydraulic	Jutland Hydraulic Gold-dredging Company	T. Jefferson	,, ,,	21/9/04
Waipori Consolidated	Waipori Consolidated Gold-dredging Company	C. F. Truesdale	,, ,,	21/9/04
Perseverance	McNeil and party	T. Aitken	,, ,,	15/12/04
Oceanic	Oceanic Steam Gold-dredging Company	A. McIvor	Dredge idle	15/12/04
Success	Success Gold-dredging Company	W. Hanley	Dredge and life-saving appliances in good order	15/12/04
Empire No. 1	Empire Gold-dredging Company	J. Hughes	Dredge idle	15/12/04
Golden Shore	Golden Shore Gold-dredging Company	..	Dredge being dismantled	15/12/04
Empire No. 2	Empire Gold-dredging Company	..	Dredge idle	15/12/04
Lower Enfield	O'Brien and Party	W. O'Brien	Dredge and life-saving appliances in good order	15/12/04
Enfield	Enfield Gold-dredging Company	C. Robinson	Visited dredge in connection with drowning fatality Charles Conroy, fireman, lost his life by drowning in dredge-paddock (11/1/04)	14/1/04
			Dredge and life-saving appliances in good order	15/12/04
SHAG RIVER.				
Inch Valley, Inch Valley	Inch Valley Gold-dredging Company	R. Stoneham	Dredge undergoing repairs	14/6/04
			Light lines and boathooks required; gangway required from bows to shore	17/6/04
Inchdale, Inch Valley	Inchdale Gold-dredging Company	P. Brennan	Dredge and life-saving appliances in good order	14/6/04
POMAHAKA RIVER.				
Greenvale, Scrubby Flat	Knewstubb Bros.	..	Dredge sunk	..
Ardmore, Kelso	Ardmore Gold-dredging Company	..	Re-erecting Coal Creek Flat dredge; the old dredge has been dismantled	..
SOUTHLAND.				
MATAURA RIVER.				
*Graham's Syndicate	Graham's Mataura Gold-dredging Syndicate	..	Dredge idle	2/5/04
*Central Mataura	Central Mataura Gold-dredging Company	W. Shore	New life-belts to be provided; boats to be equipped with life-saving appliances	2/5/04

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WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
EDENDALE.				
Two Creeks	Two Creeks Gold-dredging Company		Dredge idle throughout the year	
WAIKAKA RIVER.				
Graham and Party's, Lower Waikaka	Graham, J. A., and party	J. A. Graham	Two boathooks required, otherwise dredge and life-saving appliances in good order	20/5/04
Waikaka Syndicate, Waikaka	Waikaka Syndicate	R. Henderson	Dredge and life-saving appliances in good order	25/2/04
			" "	23/11/04
Sheddon's Freehold, Waikaka	Sheddon's Freehold Gold-dredging Company	T. Stevenson	" "	25/2/04
			" "	23/11/04
Sheddon Rex, Waikaka	Sheddon Rex Gold-dredging Company	J. Graham	" "	23/11/04
Argyle, Waikaka	Argyle Gold-dredging Company	D. Caithness	" "	23/11/04
Lee and party's steel dredge, Waikaka	Lee and party	W. Wilson	" "	26/2/04
Lilliesleaf, Waikaka	Lilliesleaf Gold-dredging Company	R. F. White	Re-erecting original machinery on new pontoons	24/6/04
			Dredge and life-saving appliances in good order	8/9/04
Garden Gully, Waikaka	Garden Gully Gold-dredging Company	J. Stewart	" "	3/5/04
Junction Waikaka, Waikaka	Junction Waikaka Gold-dredging Company	H. Mercer	Erecting machinery	3/5/04
			Gangways required in bows and across well-hole	22/6/04
Star, Waikaka	Star Gold-dredging Company	J. S. Aitken	Dredge and life-saving appliances in fair order	26/2/04
			Dredge and life-saving appliances in good order	3/5/04
Waikaka, Waikaka	Waikaka Gold-dredging Company	J. Watt	" "	22/6/04
McGeorge's Freehold No. 1, Waikaka	McGeorge Bros.	H. McColl	One lifebuoy to be re-covered; boat and light line required on bows	24/6/04
McGeorge's Freehold No. 2, Waikaka	"	J. Donald	Erecting machinery	26/2/04
			New dredge with machinery not yet efficiently guarded	3/5/04
			Light lines and boathooks required; gangway required on bows	22/6/04
Paterson's Freehold No. 1, Waikaka	Paterson's Freehold Gold-dredging Company	J. Paterson	Dredge and life-saving appliances in good order	26/2/04
			Bow-fencing to be renewed; two boathooks required	24/6/04
Paterson's Freehold No. 2, Waikaka	Ditto	"	Dredge and life-saving appliances in good order	22/6/04
Ibbotson's, Waikaka	Ibbotson and party		Erecting original machinery on new pontoons	20/12/04
Record, Waikaka	Record Gold-dredging Company	W. McCorkindale	Dredge and life-saving appliances in good order	22/6/04
Phœnix, Waikaka	Phœnix Gold-dredging Company	M. McCorkindale	Light lines and one boathook required; guard on main engine to be renewed	22/6/04
Perry's Pioneer, Waikaka	W. H. Gray	H. Rankin	Dredge and life-saving appliances in good order	22/6/04
LITTLE WAIKAKA RIVER.				
Little Waikaka, Waikaka	Little Waikaka Gold-dredging Company	J. Brownlie	Dredge idle	22/6/04
Ibbotson's, Waikaka	Ibbotson and party	T. Maslin	Dredge to be shifted to claim on big Waikaka	22/6/04
Globe, Waikaka	W. S. Paterson	W. Wadsworth	Dredge undergoing repairs	22/6/04
Waikaka United No. 1, Waikaka	Waikaka United Gold-dredging Company	A. Louden	Dredge and life-saving appliances in good order	24/6/04
Waikaka United No. 2, Waikaka	Ditto	C. M. Turnbull	" "	24/6/04

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WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
LITTLE WAIKAKA RIVER—*contd.*				
Waikaka Queen, Waikaka &	Waikaka Queen Gold-dredging Company	J. Wallace ..	Dredge and life-saving appliances in good order	24/6/04
Waikaka Forks No. 1, Waikaka	Private syndicate	James McNeil ..	„ „	24/6/04
Old Lilliesleaf	Lilliesleaf Gold-dredging Company..	..	Dredge dismantled for re-erection on new part of claim	24/6/04
Waikaka Forks No. 2, Waikaka	Private syndicate	James McNeil ..	Re-erecting the late Champion dredge	24/6/04
			Dredge and life-saving appliances in good order	8/9/04
CHATTON.				
Ibbotson and party	Private syndicate	..	Not visited	..
WAIMUMU STREAM.				
Marshall Bros., Waimumu ..	Marshall Bros.	Marshall Bros. ..	Bow-fencing to be renewed; gangway required on bows; boathooks and light lines required..	23/6/04
Waimumu Queen, Waimumu ..	Waimumu Queen Gold-dredging Company	J. Murray ..	Two oil-engines, each 25 b.h.-p., have been installed. Dredge and life-saving appliances in good order	23/6/04
Waimumu Extended, Waimumu	Waimumu Extended Gold-dredging Company	H. Leicester ..	Dredge idle	23/6/04
Waimumu, Waimumu ..	Waimumu Gold-dredging Company	W. White ..	Dredge and life-saving appliances in good order	23/6/04
Waimumu Royal, Waimumu ..	Waimumu Royal Gold-dredging Company	W. Wilson ..	„ „	23/6/04
Burrel's Freehold, Waimumu ..	W. H. Gray	T. Maslin ..	Fly-wheel on main belts to be guarded; two boathooks required	23/6/04
McLean's Freehold, Waimumu	McLean	..	Dredge idle	23/6/04
CHARLTON CREEK.				
Charlton.				
MacCharlton	MacCharlton Gold-dredging Company	T. Brandt ..	Dredge undergoing repairs	4/5/04
Charlton Creek	Charlton Creek Gold-dredging Company	C. Bennet ..	Dredge and life-saving appliances in good order	4/5/04
Central Charlton	Central Charlton Gold-dredging Company	James McCorkindale	„ „	4/5/04
Charlton Valley	H. F. Nees and Co.	..	Dredge undergoing repairs	4/5/04
Mill Creek	Mill Creek Freehold	J. Brownlie ..	Erecting machinery	13/5/04
			Dredge and life-saving appliances in good order	29/6/04
WAIKAIA RIVER.				
Waikaia.				
Argyle, Winding Creek ..	Argyle Hydraulic-sluicing and Gold-dredging Company	..	Building pontoons	24/10/04
Hessey's, Winding Creek ..	Hessey's Gold-dredging Company ..	G. Pettigrew ..	Dredge and life-saving appliances in good order	24/2/04
			„ „	24/10/04
Mystery Flat, Waikaia ..	Mystery Flat Gold-dredging Company	A. Thomas ..	Dredge idle	26/10/04
Masterton, Waikaia	Masterton Gold-dredging Company	E. Lawson ..	Building pontoons	8/6/04
			Erecting machinery	9/9/04
			Dredge and life-saving appliances in good order	24/10/04
Duke of Gordon	Duke of Gordon Gold-dredging Company	F. Brown ..	Main driving-belt and screen-driving gear to be guarded	23/2/04
			Screen- and elevator-driving gear not yet efficiently guarded	27/6/04
			Dredge and life-saving appliances in good order	24/10/04

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WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
WAIKAIA—*continued.*				
New Fairdown	New Fairdown Gold-dredging Company	William Johnston	Screen-driving gear to be guarded; fly-wheel to be fenced	9/9/04
Waikaia	Waikaia Gold-dredging Company ..	R. Allen	Erecting machinery	24/2/04
		,, ..	,, ...	27/6/04
		,, ...	Machinery-guards and life-saving appliances being placed in position	28/6/04
		N. Sligo	Dredge and life-saving appliances in good order	9/9/04
Lady Annie	Lady Annie Gold-dredging Company	James Guyton ..	Erecting machinery	24/2/04
			Dredge and life-saving appliances in fair order	14/5/04
			,, ,, ...	27/6/04
			,, ,, ...	24/10/04
Lady Gordon	Lady Gordon Gold-dredging Company	John Gordon ..	Re-erecting Nugget dredge	28/6/04
			Erecting machinery	24/10/04
Waikaia, Kia-ora	Knewstubb Bros.	George Crowley ..	Fly-wheel to be guarded; light lines and boathooks required	23/2/04
			Dredge and life-saving appliances in good order	27/6/04
			Dredge idle	24/10/04
Muddy Creek Limited, Muddy Creek	Muddy Creek Gold-dredging Company	F. Hamer ..	Light lines and boathooks required; main driving-belts to be guarded; railing on bows to be renewed	23/2/04
			Dredge and life-saving appliances in good order	27/6/04
Nugent Wood, Muddy Creek ..	Nugent Wood Gold-dredging Company	E. McDonald ..	,, ,, ...	23/2/04
		George Larking ..	,, ,, ...	27/6/04
		J. Gillespie ..	,, ,, ...	25/10/04
Garryowen, Muddy Creek ..	Garryowen Gold-dredging Company	W. Robbins ..	Light lines and boathooks required	23/2/04
			Dredge idle	27/6/04
Nugget, Upper Waikaia ..	Lady Gordon Gold-dredging Company	..	Dredge removing to Lady Gordon Claim	28/6/04
WAIAU RIVER.				
Belmont, Waiau Lagoon ..	..	..	Dredge sunk; machinery sold for removal	..

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SUMMARY OF DREDGES IN SOUTHERN MINING DISTRICT.

District.	At 31st December, 1904.	
Working—		
In Otago	106	
In Southland	46	
	—	152
Standing—		—
In Otago	13	
In Southland	2	
	—	15
Removing—		—
In Otago	2	
In Southland	3	
	—	5
Dismantling—		—
In Otago	10	
In Southland	2	
	—	12
		—
Total		184
Decrease of working dredges—		—
Otago		6
Increase of working dredges—		—
Southland		3
		—

ACCIDENTS AND FATALITIES.

GOLD-DREDGES.

Fatal.

11/1/1904.—John Charles Conroy, fireman, Enfield dredge, Waipori, was found drowned in the dredge-paddock. There was no evidence to show how he had got into the water.

29/2/1904.—Donald Hunter, fireman, New Prince Arthur dredge, Shotover River, Arthur's Point, was drowned through falling into the river while attempting to go ashore from the dredge on the coaling-line. The dredge had stranded, and the side mooring-lines had carried away owing to flood in the river.

14/5/1904.—Frank Duthie, cadet, New Lafranchi dredge, Cardrona, was found drowned in the dredge-paddock. There was no evidence to show how he got into the water.

9/9/1904.—James King, winchman, New Halfway House dredge, Clyde to Cromwell Gorge, Clutha River, was killed by being struck by a sling of coal which was being lowered from the bank to the dredge on a wire rope.

Non-fatal.

29/4/1904.—William O'Connell, winchman, Alexandra Lead dredge, Alexandra; broken rib by falling over one of the hatches.

23/7/1904.—Donald McDonald, winchman, First Chance dredge, Alexandra, fingers of one hand badly crushed while oiling the ladder-lifting gear.

9/9/1904.—Fred Resta, Ngapara No. 2 dredge, Nevis, bruised leg. While crossing the elevator in motion, leg jambed between elevator driving-pinion and the housing.

26/9/1904.—W. Nicholson, dredgemaster, Moa dredge, Alexandra: Injured head and shoulders by trestle supporting coaling-line falling on him.

5/11/1904.—W. McVey, winchman, Moa dredge, Alexandra, finger crushed by winch-brake.

I have, &c.,
E. R. GREEN,
Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

REPORTS OF WARDENS.

Mr. H. S. WARDELL, S.M. (Acting Warden), Whangarei, to the UNDER-SECRETARY FOR MINES, Wellington.

SIR,— Magistrate's Office, Whangarei, 2nd February, 1905.

I have the honour to report that in the Puhipuhi Mining District no mining operations are being carried on; the industry appears dead.

I have, &c.,
H. S. WARDELL, S.M.,
pro Warden.

The Under-Secretary, Mines Department, Wellington.

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Mr. Warden Bush, Thames, to the Under-Secretary for Mines, Wellington.

Sir,— Warden's Office, Thames, 5th May, 1905.

I have the honour to transmit herewith the usual annual report on mining matters within the Hauraki Mining District for the year ending the 31st December, 1904.

I regret that I am not in a position to report a general revival all over the field. In some parts of it very little mining has been done, simply owing to the results of the operations in hand being so unsuccessful, consequently the return of gold produced in these parts has fallen off very much; but in other portions of the field the returns have so increased that, notwithstanding the shrinkage referred to, the yield on the whole is annually increasing. This is proved by the returns for the first three months of the present year showing an increase of some £70,000 over the same period of last year.

The Kapanga Mine at Coromandel, which may be termed the oldest mine on the Peninsula, no longer exists in its former condition, the machinery connected with it having been removed and sold, and the mine abandoned by its former proprietors. A small portion of the old area is, however, still held by a few persons who took it up after the old company relinquished their holding.

The Waiotahi Mine at the Thames, a small property which has been a dividend-payer for years, has excelled itself this year owing to its good fortune in unearthing some good ore, from which very rich stone has been obtained, thereby materially increasing the returns from this mine. It is to be hoped the ore at present being worked is there in a large quantity, and that the find may lead to others in other parts of the field. The industry here requires some rich discoveries to give it new life.

The recent boring operations have not proved of much help in indicating the location of any new eef-system at the lowest depths to which they were prosecuted.

Various old mining companies have become defunct, and the properties held by them have been acquired by a syndicate of persons represented by Mr. H. H. Adams. These gentlemen have subdivided these properties into smaller holdings, and locally floated companies are being worked by this syndicate to the best of their ability. The properties referred to are the Moanataiari, the May Queen, the Alburnia, the Eclipse, the Mahara Royal, the Saxon, the Golden Belt, and the Tairua Broken Hills. These properties are all being worked by the syndicate already mentioned. It is to be hoped these enterprising gentlemen will presently be successful in unearthing some really good mines.

The dry season has proved very trying to the up-country mining operations. The want of water in the Ohinemuri River has been much felt by all the companies in that locality, and their crushing operations have, in consequence, been retarded to some extent, some of the reduction-works having been compelled to hang up half of their crushing machinery though in a position to supplement their water-power with steam. This has been a great drawback to several of the active-working mines, and should such dry seasons occur frequently, the want of water caused thereby will interfere considerably with the mining industry of this district.

Waihi.—Mining activity still continues in this portion of the district, the number of claims having increased from fifty-eight to sixty-eight since my last report, additional areas amounting to 1,200 acres having been applied for during the year. A considerable stir was caused about July last in consequence of the Waihi Extended Company finding a reef in their property and the Grand Junction Company also securing their reef at a lower level and proving it to contain gold of good value. These discoveries have raised the hopes of the community in some measure, and caused them to take greater interest in mining than was being taken previously. These finds naturally have made things look brighter in this locality than they have done for some time past. The Waihi Company are also finding their reefs improving, and becoming more valuable at increasing depths.

The Waihi Consols and the Waihi South Companies have been endeavouring (with the assistance of the Diamond Drilling Company, with whom they entered into contracts to bore) to locate some one or other of the lodes being worked by the Waihi Company, but so far the boring operations have not resulted in any new discoveries being made.

The Waihi Beach Company are sinking with a view to pick up the reef known to exist in their property, and are making steady progress.

The future prospects of Waihi appear to be brighter than ever. The population is steadily increasing as the different mines are employing more labour. In consequence of this, there is a great demand for residence-sites, and those in the township and its near proximity are practically now all taken up.

The Waihi Gold-mining Company have carried on their operations very vigorously during the past year, having employed more men than previously in connection with their works and increased the output of ore with a corresponding increase of bullion. The prospects of this company still continue to improve. As the workings go deeper the reefs appear to get larger and to be of greater value, and as the company are only working on 150 acres of their ground, out of the 850 acres they hold, they should, supposing the balance of their area is as highly auriferous as that at present being worked, have a long period of prosperity before them. They have crushed 29,000 tons more quartz during this year than last; the total number being 259,978 tons, which produced £673,101 worth of gold, as against £650,687 recovered during the previous twelve months. During the year 1,236 men have been employed on this company's mining operations. The total amount of work done in feet is 20,511, which, if placed in a straight line, would reach three miles. This work consists chiefly of driving, crosscutting, winze-sinking, and shaft-sinking. Many additions have been made to the crushing plants, both at Waihi and Waikino. The company's mill at Waikino in particular is becoming most extensive, and presents a busy and thriving appearance.

The Waihi Grand Junction Company have been developing the eastern portion of their property, with very satisfactory results. The work consists of 658 ft. of driving, 567 ft. of sinking, and 1,230 ft. have been removed in rises. During the year the company employed thirty-four wages-men and twenty-two on contract-work, besides a number excavating the site for the proposed battery shortly to be erected. Driving on the No. 2 level was continued to the boundary of the Waihi Extended

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Claim, and communication effected with that company's ground, good ventilation being thus secured for both mines. At the No. 2 level the Waihi Company's Martha Lode was intersected, and found to be 28 ft. wide. The Waihi Company's No. 2 reef was also cut, and proved to be 7 ft. wide. The values of both reefs were fully maintained for the whole distance driven. An electrical-lighting plant has been installed, and several buildings which were necessary have been completed. During the year the company purchased the forty-stamper mill which was used for a comparatively short time by the Kauri Freehold Gold Estates Company (Limited) at Opitonui. This mill has been taken down and conveyed to Waihi, where it is to be re-erected. The prospects of this company seem very encouraging at present.

The Waihi Extended Gold-mining Company (Limited): About the middle of last year this company was fortunate in unexpectedly finding the reef they were looking for at the 500 ft. level, which proved to be 18 ft. wide. The values of the reef are, however, very low, and it has been decided to sink another 135 ft. in the hope that at that level the reef upon which the Grand Junction Company are working may be struck. The reef was driven on for a distance of 100 ft., and a winze sunk to a depth of 40 ft. If the reef should turn out to contain gold in payable quantities the company will have a valuable property. Twelve men have been employed on this company's ground during the year.

The Waihi Gladstone Gold-mining Company (Limited): This company have fitted up a cyanide plant, and commenced treating the ore obtained from the ground, but so far have failed to secure payable results. They are still experimenting, and hope before long to be able to extract the gold in sufficient quantities to recompense them for the labour and expense they have gone to.

The Waihi Beach Gold-mining Company (Limited) have been engaged sinking a shaft, and during the year a distance of 100 ft. was completed. It is proposed to continue sinking to 265 ft., and then drive at the 250 ft. level, the estimated length of crosscut required to get the reef being about 130 ft. from the shaft. While sinking, a small leader about 18 in. wide was met with. A winding plant and a 14-horse-power engine have been erected on the ground.

The Waihi Consolidated Gold-mining Company (Limited): This company have been prospecting by boring for a considerable time, having entered into a contract with the Diamond Drilling Company to bore to a depth of 1,200 ft. After reaching 600 ft. the country became so difficult that the drill would not work satisfactorily, and operations had to be suspended. Nothing further has been done up to the present, although the company are trying to arrange matters so that further boring may be proceeded with. The drilling company's operations on this field have not altogether been a great success, nor have the borings so far been of much advantage to the field.

The Waihi Consols Gold-mining Company (Limited): This is another company who have endeavoured to find a reef on their ground with the assistance of the drilling company. The latter company have been engaged boring on the company's Haines Morrin Section to a depth of 1,225 ft. without striking a reef. Arrangements are again being made to put down another bore, about 100 ft. south of the former, to a depth of 1,000 ft. This is all the work that has been done on this company's ground during the year; the other portions of the area held by them have been protected.

The Waihi South Gold-mining Company (Limited): This company's property has been under protection for a considerable period, but a contract has just been let to the Diamond Drilling Company to put down a bore, and the work will be taken in hand immediately. The chairman of directors has recently left for Home, and it is expected he will be successful in raising capital for development purposes.

The Pride of Waihi Gold-mining Company (Limited) have employed two men on the Waihi Extended property during the year in accordance with an arrangement entered into with the latter company to allow the former to use its workings to facilitate the operations of the Pride of Waihi; so far, however, the results of this arrangement have not disclosed anything of a startling character.

The Waihi Alma Gold-mining Company (No Liability): So far no work has been done by this company on their ground; efforts are being made to raise capital in England with which to develop these claims, but so far nothing definite has been done.

The Martha Hill Extended, the Martha North, the Waihi Reefs, the Waihi Proprietary, the Waihi Standard, the Three Cheers, the Romulus, the Remus, the Waihi East, and the six claims held by Mr. Walker have been protected for various periods.

Besides the area held by the Waihi Beach Company, the only claims outside of Waihi are the Waihi Monument Nos. 1, 2, and 3.

The Waihi Queen, the Queen Alexandra, and the Waihi Main Leads: Only a little prospecting-work has been done on these.

Karangahake.—The New Zealand Crown Mines Company (Limited): The bullion returns of this company have decreased very much, I am sorry to say, during the past year, mainly due to the disappointing nature of the developments in the lowest levels, and the general falling-off in ore-values throughout the mine. The amount realised was £52,642, as against £80,468 the previous year. In consequence of this a thorough examination of the mine, on the lines suggested by the general manager at Karanghake, has been made by a mining engineer expressly sent for the purpose of reporting upon those suggestions, and to furnish other information as might be deemed of advantage. After examining the whole mine this gentleman in the main concurred in the recommendations and suggestions of the general manager, with the result that instructions have been received to vigorously carry out the exploratory works suggested, and that is now being done. So far, the indications of the new works are very promising, some fairly good ore having been met with, and should this prove to be of any considerable extent, the mine will probably be as successful very shortly as it was in former years. It was at one time thought that the crushing plant would have to be shut down, but so far the necessity for doing this has not arisen, although the shortage of water in the Ohinemuri River—caused by the very long spell of dry weather—prevents the mill from working to its full capacity, indeed, seldom

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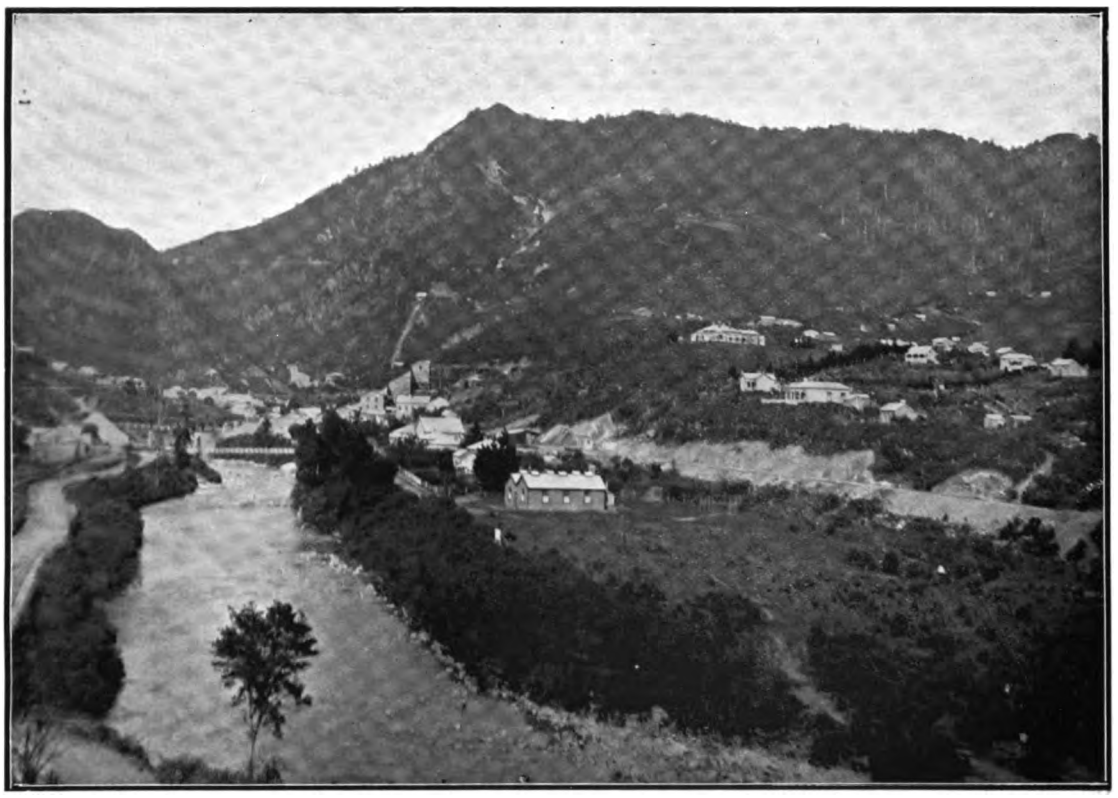

GENERAL VIEW OF KARANGAHAKE. SCHOOL OF MINES BUILDING IN THE FOREGROUND.

BRIDGE AT ENTRANCE TO MAIN TUNNEL, NEW ZEALAND CROWN MINES, KARANGAHAKE. WAITAWHETA GORGE.

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can it use more than thirty stamps, instead of the full complement of sixty. The directors of the company consider the situation critical, and do not in any way desire to minimise the gravity of the position. The work directed to be undertaken was immediately put in hand, and is being prosecuted as rapidly as possible, and the discoveries already made are most encouraging; the ore met with is of good value, the quantity of it has, however, yet to be ascertained. At this stage it is difficult to make any prediction as to what will be the result of the work now in progress, but so far as it has proceeded it is very promising. The manner in which the ore-values in both the upper and lower levels of this mine simultaneously fell off in value is another instance of the disappointments of mining. In country such as that worked by this company, where faults and dislocations in the reef system are so common, there would be nothing surprising to find values making again after the barren zone had been passed through. This temporary misfortune which has overtaken the mining operations of this company has, of course, had the effect of reducing the number of employees, a little over a hundred men only being employed at present; but should the present explorations turn out as anticipated, and circumstances warrant it, the number will soon reach that formerly engaged on this property. I hope ere making my next annual report this mine will not only have regained its former prosperous position but will have surpassed it.

The Talisman Consolidated Company (Limited): This company carries on operations at Karangahake, and have acquired the whole of the property of the Woodstock Company (also at Karangahake), it being intended to work the two properties together. During the year No. 8 level was driven to a point 1,010 ft. south of the shaft. The ore-sheet in the Bonanza section was intersected early in the year by this level, and considerable development-work has since been done on the same, with favourable results. On No. 10 level main drive, the drive has been extended to a point 701 ft. south of the shaft. This level has also intersected the Bonanza ore-shoot, showing a larger reef, with payable values. The west crosscut from No. 10 level (toward the Talisman Extended ground) is now in 638 ft. without cutting anything of value. On No. 11 level, the north drive has been pushed forward 145 ft. from the shaft, and has reached the boundary of the ore-shoot worked in the upper levels. The south drive, which is 289 ft. from the shaft, has reached the boundary of the ore-shoot, and is being continued until it gets into the Bonanza Section. The shaft is now down 183 ft. below river-level, having been sunk and timbered from No. 10 level, a distance of 350 ft., during the year. It is intended to continue driving No. 8 level until it reaches the Dobb Section. No. 10 level will be advanced until it touches the south boundary of the Bonanza ore-shoot. In the shaft a station has been cut for No. 12 level 178 ft. below river-level, and driving north and south from same will shortly be in progress. As soon as the drives on No. 12 level are fairly away from the shaft, sinking will be resumed. The general outlook for the current year's work is much more favourable than it was a year ago. During the year 1904 the mill crushed 44,888 tons of ore, yielding bullion valued at £84,826 10s. 6d.

The Comstock United: This property is in the same condition as it was this time last year. The owner is still hopeful of unearthing something payable, which he says is there. Only about two men have been employed at work on this property during the year.

The Shotover Special Claim: This claim has again been taken up by Messrs. Miller and Dilamore, who have been prospecting the ground with some success.

The Gorge, Caledonia, and the Caledonia Extended Special Claims at Owharoa are at present under protection.

The Rising Sun: The owners of this property have manfully stuck to this ground for several years without so far receiving any profit and with periods of protection carrying their mining operations on from point to point, hoping for ultimate success later on. A considerable amount of money has been spent on this claim—no less a sum than £3,222 7s. 6d. A fairly good quantity of underground work has been carried out since the ground was taken up. The property has always been held by local people, who will, it is to be hoped, shortly meet with some reward for their enterprise and pluck.

Waitekauri.—The Waitekauri Gold-mining Company (Limited).—Golden Cross Section: Boring operations have been carried on from No. 7 level, the borehole was continued from the No. 2 crosscut for a distance of 810 ft. The country penetrated was similar to that existing in No. 7 level, as proved by the crosscuts. The hole had to be cased, and, from the unsettled nature of the ground, cemented, in several places. Veins of calcite were met with, but no indications of the existance of any body of ore, such as was found in Nos. 5 and 7 levels. At 800 ft. a harder rock was met with, somewhat brittle. This hole failed to locate any continuation of the reef system. Two other holes failed to disclose anything tangible, and it was decided to remove the boring machinery to the surface and continue prospecting from there. The first hole was prosecuted to 1,100 ft. without any ore-body being met with. It may be necessary to abandon this hole and put down another from the surface. Other operations have been carried on on various sections of this property, but without any good results. On the old Waitekauri Section prospecting-work has been carried on. As a result, a block was opened up above the Queen level, which produced 1,652 tons of ore, which gave bullion valued at £4,612. Prospecting is being carried out above the South Level. There is a rumour afloat that this company intends discontinuing operations on these properties. An average of nineteen men have been employed during the year.

The New Zealand Jubilee Gold-mining Company (Limited): The area held by this company is 161 acres. During the past twelve months these properties have been under protection, though an average of ten men have been employed during the last six months in development-work. An endeavour is now being made to raise further capital in London for the purpose of sinking below the present low level, with a view to test the mine at a greater depth.

The Huanui Claim: This is now held by a syndicate. Two men are employed in opening up and testing the reef at No. 2 level, from which encouraging prospects were obtained. The reef is, however,

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very irregular in size, varying from 1 ft. to 3 ft. in width. An option has been taken over the Golden Cross battery, which it is intended to remove to the claim. This looks as if the owners of the property have some faith in its future.

The Scotia Claim: This is another old claim, recently taken up by a syndicate who are prospecting it, and have succeeded in discovering a small leader from which some rich stone was obtained. The leader is only about 3 in. thick. The amount of ore for milling is limited. Two men have been employed on these works.

The Maori Land Claim: Another claim worked by a syndicate. A small reef, varying from 18 in. to 3 ft., has been cut, but so far no gold has been seen in it. Two men have been employed. The May Bell and the Eclipse Falls have employed two men each during the year, but nothing of importance has been found in either.

Ohinemuri River.—Messrs. Brown and Thompson own several river claims, which comprise a considerable area in the bed of the Ohinemuri River, extending from Waihi to Paeroa. A plant was erected near Waihi at considerable cost to treat the tailings from the bottom of the river. Experiments were made, but the working-results were not up to expectation, and alterations in the machinery became necessary, which has had the effect of delaying larger and continuous returns being made. The proprietors, however, are satisfied that they have now discovered the exact kind of plant required to treat the tailings successfully. To enable them to make the necessary alterations and additions to the machinery, it became incumbent upon them to raise further capital, and Mr. Brown, one of the owners, is at present in England for that purpose. The tests already made have demonstrated that bullion in sufficient quantities can be recovered to make the undertaking remunerative. This is quite a new industry on this field, and, should the venture realise expectations, it is possible river-mining may become a favourite occupation.

Komata.—The Komata Reefs Gold-mining Company have been actively engaged throughout the year in their operations, a great amount of development-work having been carried out during that period. This is one of the properties which has consistently added to our gold-product during the past year. The year's work has resulted in 15,800 tons of quartz being put through the mill, which yielded bullion of the value of £32,559 17s. 3d. There is every prospect of this mine continuing to contribute its proportion of gold during the current year.

There are one or two other claims in existence in this locality upon which some prospecting-works have been carried on, but nothing of importance has been discovered. Some of these claims, however, are tenaciously held, the owners evidently being of the opinion that something worth having may be discovered in the future.

Hikutaia.—The new Maratoto: This property was idle for a considerable time, but was purchased by the present company some six months ago. This company put through 100 tons of tailings, resulting in 383 oz. of bullion, valued at £90 1s. 2d., which is considered very satisfactory, so much so, that it has been resolved to add agitators to the reduction plant, which will be the means of materially increasing the extraction. Six men have been employed on this property.

The Waimangu Claim is now held by a company. A trial crushing of 222 lb. of stone was made at the Thames School of Mines, which yielded 133 oz. of bullion, valued at £82. Many persons think this property may later on become prominent.

Te Aroha.—When the last report was written certain properties which were then owned and worked by Mr. Hardy have since been taken over by a limited-liability company, and are now owned and worked by the Hardy's Mines (Limited). This company commenced operations in April last year, and a great many extensions and improvements have since been made. The capacity of the water-race has been nearly doubled, five tunnels have been enlarged and retimbered, earth-courses have been replaced by fluming, and trestling has been strengthened. The battery and premises have been much enlarged by additional buildings for concentrating, &c., and eight of the latest-type vanning-machines, ten stampers, electro plates, hoppers, store-rooms, and tramway to the main line added. The county tramway has been acquired on lease from the Piako County Council, and the sum of £360 is being expended in improving the same. At the mines, 1,500 ft. of 6 in. piping is being laid in the Premier Gully, giving 300 ft. of fall. The power obtained will be used for rock-drills, ventilating, forge-fans, and hoisting-machine. A considerable amount of driving and rising has been done. The lowest level of the whole property in the Colonist ground—giving access to the Premier New Find Sections—has been extended, and the reefs therein driven upon. The stone in this level, as well as in the upper level, is opening up well, and a large supply of ore is stacked for treatment. A trial has been made of the surface ore in the Premier outcrop (taken for a width of 20 ft.), 250 tons of stone having produced two hundred and thirty pounds' worth of bullion and fifty pounds' worth of concentrates. Further work will be done later on when conditions for milling and transport are more favourable; in the meantime all available money is being expended upon the lowest level, where a large block of sulphide-ore has been discovered. A noticeable feature is its greater richness as the workings get deeper. The upper level show four parts of silver to one of gold in the concentrates, whereas the low level shows two and a half parts of silver to one of gold. With the percentage of copper it is claimed that the assay value of the bullion is £29 per ton. The next crushing will prove the value of the ore from both the upper and lower levels, and have an important bearing upon the future operations. At present the outlook is exceedingly good. A sum of £9,000 has been spent in labour and material. An average of twenty-eight men have been employed.

The Cadman Claim has been worked by a small party of owners, with fair results. A company has recently been formed, and it is anticipated some capital will now be available to further develop the mine.

The Success Special Claim: This claim has been worked by the licensee, and trial crushings are said to have been satisfactory.

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There are two other claims in existence—viz., the Tui Silver-mines and the Kia Ora, both of which are under protection. The area held under mining licenses in this portion of the district totals 563 acres.

Coromandel.—In this portion of the district mining during the past year has afforded no excitement. No new finds of a sensational nature have been made, consequently there is very little activity in mining. What is required is a real good discovery which would infuse new life to those engaged in seeking for the precious metal. Before any revival can be expected, a find on a fairly large scale will be necessary. Most of the former bullion-producing mines have not been as successful as they were a year or two ago. More attention has, however, been paid to prospecting in the out-districts, and it is possible some new discovery may be made which will have the effect of restoring prosperity to this portion of the district at any moment.

The Kauri Block: The rich surface patches in this locality apparently have been exhausted, and the cessation of pumping operations at the Old Hauraki shaft precludes work in it being carried on, or at the adjacent mines at the lower levels. It appears the several companies concerned cannot arrive at an amicable arrangement, and it is difficult to suggest a remedy. The establishment of a drainage-area with a board of management might meet the case if there could be a guarantee of several companies working for a period sufficiently long to recoup the cost of necessary pumping plant and pay the expenses of pumping. In consequence of the water rising and flooding the workings of the Old Hauraki, the Bunker's Hill and the Hauraki Freehold Companies have been working entirely near the surface during the past year, with the result that little gold has been won. The Old Hauraki, however, crushed 171 tons of ore for a yield of 315 oz. of gold, valued at £953.

The Bunker's Hill Company had several small but satisfactory returns prior to the stoppage of the pumps, and it is reported that rich gold was left in sight when the water rose and drove the men out of the workings.

The Hauraki Freeholds was not so much affected by the stoppage of the Hauraki pumps, and during last year several payable yields were recorded, as well as a considerable amount of development-work carried on, but latterly the water difficulty has been a great block to gold-production.

The Golden Pah has been worked entirely by tributers for a considerable period, with varying results. This claim is at present protected.

The Hauraki No. 2 Company have struggled on in a small way without tangible results.

In the Belle Vue Mine a considerable amount of prospecting has been accomplished, and several tributers are at present employed on the property.

The Tokatea Range has been very quiet of late. The Royal Oak Company's Mine has, however, been a steady gold-producer, and has employed a large staff of men. This property is one of those worked by Mr. H. H. Adams's syndicate.

The Harbour View Company has been engaged in putting in a lengthy crosscut to admit of getting under the chutes of gold worked in the upper levels in times past, and it is hoped success will reward the enterprise displayed.

The Golden Spark Company have been working away steadily and had several small crushings during the year, but so far the lower levels have not proved as rich as the surface portions of the mine.

The Tokatea Consols Mine, owned by an English company, has latterly become a steady gold-producer as the result of development-works carried out in the early part of last year and of careful management.

The Monte Christo Claim (formerly the Queen of the North) has been worked in a small way, and several small crushings have been obtained.

In the Ruby Mine a very considerable amount of development-work has been carried on, and the property is now well opened up. Attention is being directed to the smaller lodes at the present time, from which a parcel of ore was recently treated.

The main Tokatea reef traverses the Harbour View and Ruby Mines and thence across country to the Success Mine, and an effort is being made to form a prospecting association to prove the value of this enormous ore-body. There are many who believe if this is good enough to work it will prove a new era in mining for Coromandel; there is an unlimited supply of ore, and as it is known to carry a little gold it is well worthy of attention.

Cabbage Bay.—This portion of the district has been neglected of late, the only mines working there being the Austral and the White Star. There is a little prospecting being carried on towards Matamataharakeke. On the White Star two men have been employed for the greater part of the year. Mining is slow on this ground, owing to the hardness and the smallness of the leader, but nevertheless from 1 ton 5 cwt. of stone 27 oz. of gold of the value of £75 was secured.

Kennedy Bay has received some little attention at the hands of prospectors, and rich stone is occasionally found. A new find is reported by Cleaver and Sweeney upon a branch of the Omoho Creek. Several claims have in consequence been applied for, and development-works have been commenced in the Lena Special Claim; but no mining of any importance founded on these discoveries has been produced during the year.

Mercury Bay.—The Kapowai Mine is owned and worked by Mr. O'Connor, of Gumtown. In the early part of the year 45 tons of ore was crushed, which yielded 38 oz. 16 dwt. of gold. This convinced the owner that the property could be made remunerative, and measures were taken to construct a self-acting tramway with a view to save expense in getting the quartz to the mill. As a result of this wise action 485 tons was treated during the last four months of the year, producing 474 oz. of gold valued at £1,087 17s. 4d., a very satisfactory state of affairs which may at any time develop into something of much greater value and cause considerable mining activity in this locality.

The Big Beetle: This mine was worked for the first seven months of the year by a company, but as it could not be made to pay expenses, protection had to be resorted to. More recently the mine and

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battery were let to a party of tributers, who, judging from the appearance of the workings and the nature of the returns secured, are of opinion that they can make wages. Two hundred and three tons of ore were put through the mill, which produced 280 oz. 16 dwt. of gold, valued at £715 17s. Three men have been employed.

Kuaotunu.—The Waitaia Mines (Limited): During the year this property has been steadily worked, the output being 1,119 tons of quartz yielding 2,033 oz. of gold valued at £6,063, this being an increase of £1,526 on the last year's production. Twenty-one men have been employed.

The Handsworth Mine: Two men are still employed on this claim, but the results for the year have not been as good as they were in the former one; however, the owner is sanguine of better success shortly.

The Otama Mine: This property, which adjoins the Handsworth, has been worked during the year with three men. Some very rich stone was secured in the low level, and it was expected that a payable block was being opened up, but in rising a disappointment was met with owing to the gold not carrying up as good on the level. One hundred and eleven tons of ore was treated for 160 oz. 19 dwt. of gold, valued at £410 10s. 9d.

The Great Mercury Mine: Two men are all that are at present employed on this mine. The works undertaken during the year have all proved disappointing, and so far nothing satisfactory has resulted from the labour expended, although 250 ft. of driving has been done in very hard country.

Thames.—The New Moanataiari Gold-mining Company (Limited): The new Moanataiari Mine was formerly part of the old Alburnia, but is now worked by a separate company, called the New Moanataiari. The main work in this mine for the past year has been opening up and prospecting near the shaft on the Cambria Lode. At the 400 ft. level very good prospects were met with, payable ore being found in a winze sunk 65 ft. A large quantity of ore was broken out from about this winze, and crushed at the company's battery. After working for some time it was decided to put in a low level, which will enable the reef to be worked at a greater advantage. Driving is being carried on on the Cambria Reef westwards to where there is a block of untried ground on the dip of the Waiotahi and Prince Imperial Lodes.

The Kuranui-Caledonian Gold-mining Company (Limited): During the year this mine has been worked mainly by tributers, only five wages-men being employed. The tributers took out some nice stone from the several leaders worked on. These leaders all bend towards the Cambria Lode, and this fact, coupled with the find in the Waiotahi Mine adjoining, has enabled the company to reconstruct and raise sufficient capital to put in a crosscut from No. 4 level 120 ft. below the Waiotahi No. 4 level. The crosscut will be driven 600 ft., and connection for air made by means of a winze which is now being sunk from the Red Queen shaft. Strong colours of gold have been seen in this winze. When this work is completed there is every reason to believe that the company will have a good payable block of ground. A borehole was sunk at the mouth of the Long Drive tunnel to a depth of 1,500 ft., but nothing of any importance was discovered.

Old Alburnia Gold-mining Company (Limited): In this mine the main work has been the extension of the Moanataiari tunnel, which has been extended 710 ft. The kindly nature of the quartz met with in the No. 1 and No. 2 reefs induced the company to drive on them and send some 130-odd tons to the battery, but it did not turn out as well as was expected and driving the long tunnel was resumed, the driving of which to a position beneath where a good run of gold-bearing ore was met with in the Alburnia some years ago was the main object for which the company was formed.

The Victoria Mine: Tributers worked this mine for the greater part of the year, but did not do very well. Lately the directors decided to do some work on the Mariner's Lode, but up to the end of the year nothing had been discovered of a payable nature. A borehole sunk on the foreshore to a depth of 1,016 ft. went almost wholly through broken country, and it was decided to cease boring. It was intended to bore on other parts of the ground, but the proposal has not been given effect to.

The Kuranui Mine: Six men have been employed continuously on this ground opening up the Tributer's Lode and working on the leaders in the Shellback tunnel, but nothing payable has been found.

The Fame and Fortune Mine: Eleven tributers have been employed in working on the various leaders, but were not very successful.

The West Coast, Ballarat, and some other small claims have been worked in the vicinity, but nothing of any consequence has been discovered. I learn that the owners made a fair wage, and are content to continue working their respective properties.

The Nonpareil Mine: Tributers only have been employed in this mine, working on the Wade and Liverpool Boys Reefs. They treated 150 loads of quartz for a return of £645 10s. 3d.

The Waiotahi Mine: The prospects of this mine improved greatly during the last month of the year. When opening out a chamber at the back of No. 4 level, rich ore was met with. A crosscut was driven in an easterly direction for the purpose of intersecting the Waiotahi main reef, and to connect with a winze and thus supply air. About 80 ft. from the chamber the hanging-wall of the reef was struck, and found to contain very rich stone in the mineralised portion. The reef varies from 15 ft. to 20 ft. in thickness. This discovery, if it proves a payable chute and not a patch, will have a great effect on the prosperity of the place; in fact the closing days of the year were marked with a feeling of hopefulness not experienced for a good many years.

The New Saxon Gold-mining Company (Limited): The New Saxon Mine is composed of part of the May Queen Hauraki and the Cardigan. Work has been going on from the Saxon shaft in the Cardigan Section on a leader about 8 in. in thickness. Gold has been seen frequently when breaking down, but as yet no crushing has taken place, so that the value of the general dirt cannot be obtained. The manager is confident that it will prove payable. From other parts of the mine 221 tons was treated, and 138 oz. 7 dwt. obtained, valued at £339 10s.

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The New May Queen Gold-mining Company (Limited): This property consists of the balance of the May Queen Hauraki. The company has commenced to repair the No. 3 level on the No. 4 lode for the purpose of connecting with the old May Queen shaft, and thus providing ventilation. When this has been accomplished a drive will be put in easterly to cut the reefs in the St. Hippo Section. When the water has been reduced low enough, extensive works will be carried out in opening up blocks of ground on the No. 4 and North-west lodes. The future of this mine depends to a great extent on the result of working operations of the Hauraki pumping plant.

The May Queen Extended Gold-mining Company: For the greater part of the year operations were confined to the Marion Reef, and a considerable amount of driving and stoping done. The ore won not proving payable, work was stopped for a time. The prospects met with in the New Una Mine adjoining induced the management to drive a crosscut along the boundary a distance of 150 ft. The small reef was cut and a few pounds of picked stone obtained. The prospects met with justify the manager in coming to the conclusion that he has a payable block of ground to work out.

The New Una Gold-mining Company (No Liability): The low-level tunnel has been driven on in an easterly direction, with the object of intersecting the Loyalty Lode. A lode-formation showing gold was met with 690 ft. from the entrance to the tunnel. This lode was worked northerly, and twenty-five loads of quartz and 50 lb. of specimens obtained, which, when crushed, yielded 89 oz. 4 dwt., value £224 2s. 6d. A drive was put in on the formation 125 ft., and a rise 115 ft. put up. A strong body of water was met with and work had to be discontinued. The main drive was then extended through the main slide, and a reef 18 in. in thickness cut on the other side. This lode was driven on both north and south, but payable ore was not found in sufficient quantities. By arrangement with the May Queen Extended Company work was commenced from the Adelaide tunnel in their ground. This work is now going on. In the May Queen Extended ground (on the boundary) encouraging prospects were met with, gold being frequently seen in the stone.

The Arrindell Syndicate (Limited): This is a Scotch company, and is working the late Gloucester and George Turnbull Claims. A five-stamp battery with three berdans has been erected, and a water-race and tramway constructed connecting the battery with the mine. Development-works are in progress, and it is intended to commence crushing in a short time.

The Golden Drop Claim: The owners met with excellent prospects in a winze sunk on a leader, and intend to put in a low level and open up a block of ground which they have every reason to believe will be payable.

Very little has been done in the Fortuna and Claremont Claims this year.

The Mascotte Mine, Otanui, has been worked by a small syndicate, who are engaged in sinking a shaft for the purpose of proving the lode at depth. Good gold was got in the upper levels some few years ago. Water considerably impeded the work of sinking, and a small pump had to be erected. The prospects are encouraging.

The Tararu Mine: This mine is owned by an English lady, Mrs. A. G. Trower, and is under the management of Mr. R. W. Powell. The principal works have been the reopening of the workings on the old Day Dawn reefs, and sinking a winze, driving a new level in the Sunbeam Section, putting up a rise in the reef, and putting up from the battery level a new rise to connect with the Sunbeam rise. The old connection having caved in it was deemed best to put in a new one. When this is completed quartz from the Sunbeam Reef will be easily taken to the battery.

The Eclipse Gold-mining Company (Limited): The low level has been extended to a position under where the gold was found in the upper level, and a connection made by rising and sinking on the reef. Very rich specimens were obtained at the back of the low level, and stoping is now going on on the reef. A crushing of 133 tons gave a return of £867. The mine is looking exceedingly well.

The New Monowai Gold and Silver Mines (Limited), Waiomo: The Waiomo Gold-mines (Limited), (the former owners), sold out all their rights in New Zealand and went into liquidation. The claims were purchased at auction by Mr. J. J. Craig, of Auckland, and the present company formed. A contract has been let to drive 1,000 ft. on the reef, to get under where a rich run of ore was worked by the former company. This work is now going on.

The Mahara Royal (Limited) Tapu: The company has been engaged in sinking two winzes on the main reef at the main adit level and stoping out the reef. The reef was 6 ft. thick, and carried a large amount of mineral in which gold was frequently seen, but it was found to be of low grade, 1,874 tons of ore only yielding £1,785.

The Sheridan and one or two small claims have been worked, but nothing of a payable character found.

The Waimangu Gold-mining Company (Limited), Whangamata: This is a new mine, the reef only having been discovered within the last few months. Very rich ore was met with on the outcrop of a reef by Messrs. Tilsley Bros. A trial crushing of about 2 tons gave a return of 33 oz. 3 dwt., valued at £82 13s. 3d. A drive is now being put in to intersect the reef.

The Mananu Mine: This mine and almost all other mines in this vicinity have been closed down. I have heard that it is likely the Mananu will be taken up and worked again by a small Auckland company.

The Klondyke Gold-mining Company and the Puriri Gold Estates (Limited), at Puriri, have not done much work during the year, the ore found not being payable.

Tairua.—The Tairua Broken Hills Gold-mining Company (Limited): This mine has been vigorously worked during the past year. During the first half of the year operations were carried on in the blocks of ground which were opened up over the main adit level, and good payable quartz was obtained. When these blocks were worked out, operations were commenced to open up the unexplored portion of the mine. A winze was sunk on the reef to a depth of 80 ft. from the bottom of the level. Water coming in, a small engine was erected to work the pump and raise material. A drive was put in at the bottom of the winze on the Blucher Reef 100 ft. westward and 15 ft. eastward. This block of ground is now being worked. Ore won and treated, 3,700 tons, which yielded 6,728 oz. 4 dwt., value £10,287.

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The Chelmsford Gold-mining Company (Limited): This company are engaged in extending the upper levels on the reef, which, when first discovered, gave very good results. It is expected that a payable block of ground will be available.

The Coronation Gold-mining Company (Limited): This company's mine is on freehold property, Wharekawa Blocks, held by license issued under section 56 of "The Mining Act, 1898." A five-stamp battery has been erected and crushing is to be commenced soon. The ore is of a peculiar nature, but is said to be payable.

The Golden Belt Gold-mining Company (Limited): The low level has been extended, and is now in 1,000 ft. It is expected that another 300 ft. will bring the drive under that point where good ore was met in the Road Level. It is intended to put up a rise from the end of the level which will serve as a pass to send down the quartz, and also ventilate the mine. The quartz will be conveyed to the mill over an aerial tramway. A battery of forty stamps is being erected. It is confidently hoped that this mine will soon become a payable one.

I have, &c.,

The Under-Secretary, Mines Department, Wellington. R. S. Bush, Warden.

Mr. Warden Roberts, Tauranga, to the Under-Secretary for Mines, Wellington.

Sir,— Warden's Office, Tauranga, 20th March, 1905.

I have the honour to acknowledge the receipt of your memorandum of the 27th January last, asking me to furnish you with a general report of the general condition of the mining industry in my district for the year ending the 31st December, 1904, and in reply thereto, have to inform you that during the past year mining operations totally ceased in the Tauranga portion of the Hauraki Mining District owing to lack of capital to carry out development-work.

I return herewith the forms enclosed in your memorandum filled up as requested.

I have, &c.,

J. M. Roberts, Warden.

Tauranga portion of the Hauraki Mining District.

The Under-Secretary, Mines Department, Wellington.

Mr. Warden Smith, Blenheim, to the Under-Secretary for Mines, Wellington.

Sir,— Warden's Office, Blenheim, 15th April, 1905.

There is practically nothing of any importance to report concerning mining matters in any portion of the Marlborough Mining District for the year ending the 31st December last.

Quartz-mining was represented solely by the operations of the Wairau Valley Gold-mining Company at Top Valley. This company, which has taken the place of the Jubilee Company, was engaged in extending the low-level tunnel, for which purpose a contract to drive 300 ft. was let. The contract had not been completed when the year closed. It was estimated that a distance of 1,300 ft. would have to be driven before the lode would be reached.

Dredging was entirely at a standstill. Nothing was done towards replacing the Alpine dredge—whose misfortune was referred to in my last report—on the claim. Disaster again overtook the Golden Point dredge at Wakamarina, which sank while being shifted down the claim. The dredge has been dismantled and all the machinery removed from the claim

Alluvial mining is not conducted on a scale of any magnitude, and calls for no comment.

Reference having been made in my last report to the formation of a company for the purpose of manufacturing cement near Picton, I might mention that the erection of machinery and buildings for the purpose was in a very forward state at the close of the period under review, and that operations will shortly be commenced.

Statistical returns are forwarded herewith. I have, &c.

The Under-Secretary, Mines Department, Wellington. T. Scott Smith, Warden.

Mr. Warden Kenny, Nelson, to the Under-Secretary for Mines, Wellington

Sir,— Warden's Office, Nelson, 9th May, 1905.

I have the honour to forward herewith statistical returns for the year ending the 31st December, 1904, together with a general report upon the mining districts under my administration.

The Slate River Sluicing Company (Limited).—Since the formation of this company in July, 1900, no less than £16,581 has been spent in plant, wages, working-developments, &c., and, during the period to which this report more particularly relates, some thousands of pounds have been spent in augmenting the storage of water, and extending the low-level-tunnel tail-race. Sluicing operations have been greatly hindered during several months of the year owing to shortage of water. 503 oz. 5 dwt. 18 gr. were won for the twelve months ending the 31st December, 1904

The Slate River Gold-dredging Company (Limited).—This is the only dredge now carrying on active operations in this district, and it is now in work upon a claim held by the company in the bed of the Aorere River. The working of the dredge was considerably hampered in the early part of the year by floods. For the period from the 1st May, 1904, to the 16th March, 1905, gold to the value of £2,670, or an average of fifty-nine pounds' worth of gold per week, was recovered. The ground over which this dredge has been working is ground that has been worked before by private individuals and parties, chiefly by that method commonly known as "blind stabbing," and it is confidently expected that when the dredge works her way on to fresh ground, highly satisfactory results will be obtained.

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Parapara Hydraulic Sluicing and Mining Company (Limited). — Mining operations have been carried on by this company throughout the year, but in most cases, upon cleaning up, the results have not proved encouraging. This is owing chiefly to the difficulty in working, it being necessary to put a great quantity of non-gold-bearing material through the boxes before the rich wash which exists can be worked.

The Golden Block, Taitapu (Limited).—This quartz-mine gives the most consistent return of any concern in the district. The quantity of quartz crushed for the period to which this report relates was 2,411 tons, from which a yield of 2,222 oz. of gold was obtained. The company employ thirty men.

One reason for this report being delayed so long is that I have been unable to obtain some information concerning the Taitapu Gold Estates (Limited), and have to omit it in the return. Had the statement of affairs appeared in the *New Zealand Gazette*, the information could have been got from that source; but no statement has been published in the *Gazette*, and my request through the Clerk of the Warden's Court at Collingwood to the attorney for the company for the facts required has not been complied with. So far as I can gather, this company has been carrying on operations at the Golden Ridge and Ant Hill Mines, but the returns have been very small.

Quartz Ranges.—A party of tributers, working on the Quartz Ranges upon a claim formerly worked by the Collingwood Goldfields Company (Limited), who erected a valuable plant, have obtained payable gold as a result of sluicing operations carried on by them.

Takaka Subdistrict.

During the year fifteen applications were received and heard for mining privileges.

At Bubu the Takaka Sluicing Company's claim still keeps up its reputation as a paying concern. During the past year there were 900 oz. of gold obtained and two dividends declared of £450 each, besides £450 retained as a reserve fund. The claim is worked by three shifts. The average amount paid in wages and incidental expenses has been about £100 per month. The last washing-up for a fortnight's work produced 58 oz. of gold. The ground on this claim has, I understand, been thoroughly prospected, and it would seem that the shareholders may reasonably look forward to good results for several years. This is really the only claim which is doing any good in this subdistrict. There are four others in the locality, but the returns obtained are, I am informed, extremely poor.

The Anatoki, Jackson's, and Sheepy Flat Claims are lying idle.

At Upper Anatoki a prospecting party has been formed and subsidised by some Takaka residents to thoroughly prospect that locality. This party at present are turning the river to enable them to work a bar. The great hindrance to working in this locality is the difficulty of procuring food; all the necessaries of life have to be carried on men's backs for several miles. If a track were made to enable horses to pack supplies I believe it would be possible for a good many men to find remunerative work in this part of the country. There are two other men prospecting the reefs further up on the ranges on their own account, but with what result is not known. There is one old hatter working a claim on the Anatoki River.

At the head of Waingaro River two men have gone to prospect.

At Waitoi there are three fossickers working for very little.

Wangapeka Subdistrict.

Only three men are now working on the Rolling River (Blue and Nuggety Creeks), who are old hands. They have made themselves comfortable surroundings and are content to work for small returns. A little prospecting has been done for reefs during the summer months on the hills at the head of Rolling River, but as yet without any practical results.

The Wangapeka Gold-dredging Company.—The dredge which has been working on this river during the year has now closed down, and the company has gone into liquidation. It is reported the average weekly earnings have been only about 3 oz. The company have expended £13,000 during its existence. There seems very little prospect of any further work being done here. In the opinion of experienced miners there was no chance of success from the first, as very little gold has ever been obtained from the lower reaches of this river, whilst the bed of the upper portion is too rough and rocky for dredging.

Sherry Valley.—Only one man is at work, on private property. He has a complete hydraulic plant, and is said to be making fair average wages.

The Baton.—This river has been practically deserted during the past year, only one miner, who is a settler in the district, putting in his spare time on the river, and this with very poor results. The demand for labour on the Tadmor-Motupiko Section of the Midland Railway has no doubt induced many old miners to work for regular wages on the railway-formation.

Motueka Subdistrict.

As far as I can ascertain, there are only four miners working on the table-land, and they are making a bare living. There are two water-races, one tail-race, and two dams in existence in this locality, but no gold-saving appears to have been effected by the owners of these rights. The holders of the prospecting licenses for asbestos have long since allowed them to lapse.

Coal.

This is becoming a most important industry. The Puponga Coal and Gold Mining Company (Limited), have made really considerable headway with the development of their colliery at Puponga during the twelve months, the output for that period being 12,042 tons. The output is now rapidly increasing owing to the further development of the mine, and it is now estimated to average 100 tons

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per day. It will be unnecessary for me to go more into detail regarding this mine, because, through the kindness of the company's manager, I am in a position to annex to this report a very full memorandum, which contains much useful and interesting information. But, I may add that I hear on excellent authority that it is the intention of the company to expend some capital in improving their harbour, which is at present a difficult one to work owing to the distance to which the sea retires at low water.

Memorandum by the General Manager of the Puponga Colliery.—On the company's wharf, which is half a mile in length, storage-bins have been erected capable of holding 400 tons to facilitate the loading and despatch of shipping. From the wharf the narrow-gauge railway-line extends for a mile and a half to the mine, over which distance the coal is hauled by the company's locomotive. At the mine screens and more bins have been lately completed, and a coal-washing plant has been fitted up, so that the nuts are kept of the best marketable quality. A stationary haulage engine has been erected, which draws the coal from the dip workings on the direct-haulage system. During most of the year the coal has been chiefly worked from the level-free portion of the coalfield, but latterly the dip-haulage road has been pushed ahead, and the workings opening up therefrom are developing well, showing coal of excellent quality and of a good workable thickness, the height of the workings being 7 ft. 6 in. This is a rather important feature, when the general thin nature of the coal-seams in the Collingwood, Pakawau, and Puponga district is remembered. So far the water has not been very heavy, and has been drawn by the haulage engine by water-chest after work has ceased for the day; but owing to the gradual increase of drainage from the strata, which is to be expected as the mine gets more extensive, a pump has just been obtained and is now being installed. To adequately ventilate the mine as the airways become longer and the workings extend, a fan capable of circulating 45,000 cubic feet of air per minute has been ordered, and is now being constructed by Messrs. Johnston and Sons (Limited), Invercargill, while a Tangye engine to drive it has been obtained. The output has considerably increased during the year, and now exceeds 100 tons per day. The shallow-water conditions prevailing at the wharf and harbour prevent it increasing as it should, but the matter of an improved channel with greater depth of water and a swinging basin for steamers of moderate size is being considered.

In addition to their own leaseholds the Puponga Coal Company have bought out the Cape Coal Company, and the respective areas are now amalgamated. A valuable bush-area has been acquired, from which all the mining-timber is obtained, and it is connected with the mine by two miles of tramline laid with steel rails. Mr. N. D. Cochrane is the general manager and mining engineer for the company, and has charge of the opening-up and development of the coalfield. Mr. McCaffery is mine-manager, and over eighty men at present find employment at the colliery and works.

Motupipi.—The coal-deposits here are again being worked on a small scale, and it is stated that the coal obtained, though unsuited for steam purposes, is well fitted for domestic use.

I regret that this report does not on the whole disclose a more satisfactory condition of the mining industry so far as gold is concerned. There are, I believe, two causes at the back of this state of things—an indisposition on the part of the present generation to prospect rough country as their fathers did before them, and want of capital. I fear that there is no hope of seeing foreign capital invested in mining enterprises in this country whilst the deplorable war in the Far East continues to afflict mankind.

I have, &c.,

H. Eyre Kenny,

The Under-Secretary, Mines Department, Wellington. Warden.

Mr. Warden Kenrick, Greymouth, to the Under-Secretary for Mines, Wellington.

Sir,— Warden's Office, Greymouth, 14th April, 1905.

Herewith I have the honour to forward to you the detailed reports on the several subdivisions of the mining district under my charge for the year ending the 31st December, 1904.

Reefton-Inangahua District.

Mr. E. W. Spencer, general manager of the Progress Mines of New Zealand (Limited), the Consolidated Goldfields of New Zealand (Limited), and the Welcome Gold-mining Company, furnishes the following reports on the operations of the various companies under his control during the year 1904:—

Progress Mines of New Zealand (Limited).—Development-work has again been energetically carried on during the year on levels Nos. 3, 4, 6, 8, 9, and 10, resulting in the opening-up of a large tonnage of quartz, of which a considerable quantity is of very low grade. The total footages driven, &c., during the year are as follows—Driving and crosscutting, 3,442 ft.; rising and sinking, 1,311 ft.: total, 4,753 ft.—at a cost of £7,030 10s. Stoping has been carried out on Nos. 4, 5, 8, 9, and 10 levels, the stopes calling for no special comment, except in the east stopes on No. 4 and 5, where on account of an increased percentage of antimony a larger portion of the quartz has had to be used as filling. During the latter half of the year the developments were watched with a great amount of interest on No. 10 level, as an ore-body was encountered which appeared to be of large extent. This body of stone was driven on in all directions and the stone on the level taken out, leaving an area of 120 ft. long by an average of 20 ft. wide standing on timber. A small portion of this block is of good value, but generally speaking the quartz from end to end is of very medium grade. A rise was put through to No. 9, which carried up stone for about 70 ft., and eventually connected to No. 9 on good reef-formation. Diamond drill: The drill was kept steadily at work for about eight months and a half, and drilled 2,125½ ft., gaining some valuable information; but the ground in the vicinity of the reefs is too soft to obtain much

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core. On surface the equipment at the mine has not undergone any material alterations, and all the machinery has been maintained in a thorough state of efficiency. At the battery, the only alterations of importance consist of an additional 25-ft.-diameter treatment-tank which has been erected, making in all fourteen tanks of equal size. During the year the sixty-five-stamp mill ran 303·73 days, leaving only 8·27 days lost time for the whole year, to include all incidental stoppages, such as monthly clean-ups, daily scrapes, &c. The tonnage crushed exceeds that of any previous year by 2,794 tons. The 59,908 tons crushed yielded bullion by amalgamation to the value of £88,641 15s. 3d., equal to 7 dwt. 3·93 gr. per ton. 1,093 tons of concentrates were treated in the chlorination-works, yielding 2,750 oz. 14 dwt. 5 gr. of gold, valued at £11,020 7s. 7d. At the cyanide-works, 31,735 tons of coarser sands were treated, yielding bullion to the value of £8,674 18s. 5d. The treatment-cost amounted to 2s. 1·777d. per ton, and the profit to 3s. 3.828d. per ton, making the yield equal to 5s. 5·605d. During the year a certain amount of pyritic slimes has been shipped to the smelter—these realised £2,034 1s. 7d. A general summary of the aggregate working-cost, yield, and resulting profit in milling 59,908 tons and cyaniding 31,735 tons during the year 1904, is as follows: Total working-cost (exclusive of capital and development expenditure)—Incurred in mining, transporting, milling, and concentrating, and chlorinating (including bullion charges and office and general expenses), £48,671 19s. 3d., or 16s. 2·987d. per ton milled; cyaniding, £3,408 10s., or 1s. 1·655d. per ton milled; total, £52,080 9s. 3d., or 17s. 4·642d. per ton milled. Profit—mining, transporting, milling, and concentrating, and chlorinating, including bullion charges and office and general expenses, £53,024 5s. 2d., or 17s. 8·423d. per ton milled; cyaniding, £5,266 8s. 5d., or 1s. 9·098d. per ton milled: total, £58,290 13s. 7d., or 19s. 5·521d. per ton milled. Summary—Total working-cost, £52,080 9s. 3d., or 17s. 4·642d. per ton milled; profit, £58,290 13s. 7d., or 19s. 5·521d. per ton milled: yield, £110,371 2s. 10d., or 36s. 10·163d. per ton milled. A slightly lower-grade quartz has been milled during 1904 than previously, and this will probably again be the case in 1905, otherwise we look forward again to another successful year. The same policy will be pursued with regard to the underground work, viz.—to push the mine-development energetically. The main shaft will also be sunk to another level during the year.

Wealth of Nations.—Stoping has been carried out on levels 2, 3, 4, 5, and 6, whereby all the quartz has been taken from levels 4 and 5. The reserves of mill-rock in the mine now being confined to levels Nos. 3 and 6, and the new level No. 7 opened from the Energetic shaft. During the year 12,748 tons of quartz was crushed yielding bullion to the value of £14,666 16s. 8d., or 5 dwt. 16·92 gr. per ton. The concentrates and slimes were shipped to the smelter, realising £1,068 5s. 3d. At the cyanide-works 8,710 tons representing 69·803 per cent. of the total crushed, yielded bullion to the value of £5,941 5s. 1d. The working-cost for the year amounted to 16s. 4·890d. per ton milled; this figure includes mining, milling, and concentrating, cyaniding, assay office, and bullion and gene al charges.

Energetic Mine.—A large amount of development-work has been done in this mine during the period under review. The reef system was encountered at 267 ft. from the shaft, and drives were put out 45 ft. to the north and 698 ft. to the south. In the north drive a rise was laid off to connect to the winze sunk from the level above this, and it was when this connection was being made that the sad accident occurred which resulted in the death of three men who were poisoned by the gas liberated from the stagnant water in the winze when the connection was made. This level on the whole was a great disappointment, as only a small amount of quartz was opened up, and even that was of low-grade quality. Diamond Drilling: Four diamond-drill holes were run out from No. 7 level, hoping to locate a parallel ore-body. Three were productive of no result; the other located a small band of stone, and a crosscut is now being driven to intercept it. Shaft: The Energetic shaft was let on contract during October to sink it down to No. 8 level, a distance of 125 ft. This was finished during February, 1905, when a start was at once made to open out No. 8 level at a depth of 1,502.5 ft. from the surface. On surface: A direct-coupled Tangye winding-engine started to hoist from the bottom of the shaft in March last, and has since run in a satisfactory manner. A small electric-light plant was installed, which efficiently lights the surface and the chambers at the different levels.

Golden Fleece.—The shaft has not been sunk during the year, but a very considerable amount of development-work has been done in levels Nos. 11, 12, and 13, all of which have been extended north. In all 1,539½ ft. of development-work was undertaken. The stopes have fully maintained their previous characteristics, proving the reef itself to be very irregular in width, thereby making stoping a very expensive item. The shaft is again about to be sunk from No. 13 to No. 14 level, a vertical distance of 125 ft. During the year 12,930 tons of quartz was crushed, yielding bullion by amalgamation to the value of £21,040 17s. 6d. The concentrates and slimes were all shipped to the smelter, and realised £1,940 3s. 7d. Cyanide: 8,610 tons of sands, representing 66·589 per cent. of the tonnage milled, was cyanided yielding bullion to the value of £3,011 7s. 5d., equal to a return of 6s. 11·941d. per ton treated.

Welcome Group.—The Welcome Mine was let on tribute to O'Leary and party for a term of three years from the latter end of the year 1903. They continued to work this property until May, 1904, when, although very handsome inducements were offered to them in the shape of a subsidy on future development-work done by them, they abandoned the tribute. Up to this time they had milled 382 tons of quartz for a return of 435 oz. 14 dwt. 21 gr. of gold, valued at £1,726 15s. 9d.; besides which 225 tons of tailings was treated, yielding bullion to the value of £396 4s. 4d. The company did some more development-work after the tributers abandoned, and then obtained six months' protection to enable the wishes of the London office to be consulted.

New Scotia Gold-mining Company (Limited), (Merrijigs).—The system of work determined upon at the end of 1903, that is, the removal of the winding plant and engine from the old Drake main shaft to Martin's winze, was carried into effect early in this year. The whole of the above plant was reinstalled there and placed in good working-order. In the middle of April sinking was again resumed on the lode from this winze, and continued until a total depth of 123 ft. was reached. The reef continued to improve in width as greater depth was attained. For the full distance it averaged from 2 ft. 6 in. to 3 ft.

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6 in. in width, but in the bottom of the winze when sinking was stopped it was 4 ft. 6 in. wide in the north end and 3 ft. 6 in. in width at the south end, and the stone showed good gold. At 111 ft. down the winze (thus leaving 12 ft. for a well-hole) a chamber 8 ft. high, 10 ft. long, and 8 ft. wide was excavated, and a level extended both north and south along the reef. The result of this driving was that the lode was found to be 90 ft. in length at this point, and gave very strong indications of lengthening as deeper development proceeded. Stoping operations were then started on the roof over the 111 ft. level, and continued until the stone became too thin and the length of the block too short to be worked profitably. Altogether, 257 tons of stone was mined and milled for a return of 123 oz. 17 dwt. 20 gr. of gold valued at £474 1s. 8d., and 222 tons of tailings was cyanided for 65 oz. 10 dwt. of bullion valued at £151 10s. These combined values are equal to £2 8s. 8d., or 12 dwt. per ton milled. To enable all the stone raised out of this shaft to be sent to the battery cheaply, an aerial tramway 780 ft. in length, with 105 ft. of fall, thus enabling it to be worked by gravitation, was erected, and has performed the work required of it efficiently. After the stopes were exhausted a start was again made to sink Martin's winze on the reef. Seventeen feet only was sunk when works were stopped in consequence of the company's capital being all called up, and steps are now being taken to raise additional capital or reconstruct the company. At the deepest present point in the winze the reef is 4 ft. 6 in. wide throughout, carrying good gold from the foot-wall to the centre of the stone, and the remainder is payable.

United Gold-mines (*Limited*).—The work for the year has consisted chiefly of prospecting—endeavouring to trace a continuation of the block of stone on which the winze was being sunk from the Exchange top level. The stone cut out 21 ft. down from the level. The winze was continued down to a further depth of 50 ft., the sinking being on a well-defined reef-track with a good foot-wall all the way. Little pieces of broken quartz were often met with in the sinking, but nothing solid. At the bottom of the winze the lode-track was driven on both north and south; also some crosscutting was done, but nothing payable was found. The remainder of the quartz under the level at the top of the winze was then stoped out and crushed at the New Scotia battery: 160 tons of stone producing 100 oz. 3 dwt. of gold value £395 10s. 5d., and by cyanide process the tailings produced 114 oz. 3 dwt. 11 gr. of bullion value £385 3s. 7d., being a total of £780 14s. obtained from 160 tons, equal to £4 17s. 7d. per ton

Prospecting has since been continued, the object being to pick up a continuation of the same run of reef further south. About 200 ft. distant a reef has been driven through, giving small prospects of gold. The reef is lying very flat. It is intended to do further prospecting on this stone, as a few feet of driving might show a great improvement in its quality.

Ulster Gold-mining Company (*Limited*) (*Painkiller District*).—Early in the year a company was formed under the above title to explore the Ulster lease, which had been under development by a small local syndicate. The new company started work last April, but owing to difficulty in getting goods, supplies, rails, timber, &c., conveyed to the mine, only a few men were employed, and, moreover, as a great deal of preliminary work had been done outside the mine, such as cutting out quartz paddock, laying tip and roads, erecting smithy, &c., the actual mining operations were greatly retarded. The level was then continued on the reef, but after 25 ft. had been driven the reef, which averaged from 1 ft. to 2 ft. wide, clean and solid, carrying good gold, got slightly broken, and continued so for a further distance of 55 ft., when driving of level was stopped. This drive is now in 320 ft. altogether, of which 135 ft. to 150 ft. is on solid stone. A winze was sunk 60 ft. in depth on the reef, and a prospecting drive carried along north on the stone for 38 ft. Another winze was then commenced on a surface outcrop of the lode at a point 420 ft. south of the first reef opened in the level. This winze is now down 35 ft., and is following a reef-formation 5 ft. or 6 ft. in width, largely composed of quartz, all of which carries highly payable gold.

The New Inkerman Mines (*Limited*).—Mr. Dudgeon, attorney for the company in New Zealand, reports as follows: "During the twelve months ending the 31st December, 1904, the following development-work has been carried out: 352 ft. of driving, 45 ft. of sinking, 116 ft. of rising, and 136 ft. of crosscutting—total, 649 ft. Stoping: During the twelve months under review 7,639 tons of quartz has been stoped and delivered at the battery, 1,139 tons from above the main level, and the balance, 6,500 tons, from the 100 ft. level. Battery: At the end of May extra five heads of stamps were erected, increasing the plant to twenty stamps. 8,139 tons of quartz was milled and 1,690 tons of tailings was also put through the battery, yielding by amalgamation 1,854 oz. 3 dwt. 9 gr. bullion, equal to 1,680·212 oz. fine gold, value £7,768 4s. 2d. 5,882 tons of coarse sands was cyanided, yielding 769 oz. 6 dwt. 22 gr. bullion, equal to 554·705 oz. fine gold, value £2,396 8s. 5d. 152 tons 8 cwt. 15 lb. of concentrates and slimes were made during the year and shipped to New South Wales for treatment, yielding £1,104 17s. 11d. Working-costs: The total working-costs, including development-work, capital expenditure, management and office expenses, &c., were £1 1s. 1·04d. per ton. The cost of stoping, including delivery of ore at battery, was 8s. 6·496d. per ton. Milling, including mill-repairs, coal, &c., 5s. 5·71d. per ton. Cyaniding, 2s. 4·252d. per ton cyanided. Future operations: The question of carrying out further development-work on the ore-body which is now being operated upon by means of an incline shaft to be sunk to a depth of approximately 400 ft. below the main level, is under consideration by the owners of the mine, and the advisability of locating and developing from the present main level the continuation of what is known as the 'big blow' outcrop is also being considered, but at present no decision has been arrived at."

Big River Gold-mining Company (*Limited*).—Mr. Lee, manager of the company, supplies the following extracts from the annual report to shareholders for the year ending the 31st December, 1904: "At the commencement of the period stoping was in progress on a reef over No. 7 level and also on another lode over the intermediate level situate about midway between Nos. 6 and 7 levels. Altogether 1,328 tons of stone (each of 22 cubic feet measurement) was won from both reefs and sent to the battery for crushing. The yield of gold was 1,355 oz. 8 dwt., valued at £5,489 11s. 11d., from the

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battery only, and is equal to 1 oz. 0 dwt. 10 gr., or about £4 2s. per ton. The whole of the resulting tailings have been stored on the sand-dump for future treatment by cyanidation and other methods. The operations on the lodes were not so profitable to the company as had been anticipated, owing chiefly to the reef over No. 7 level diminishing in size and quality as the stopes advanced towards No. 6 level, finally giving out about 60 ft. over No. 7 level. Then the intermediate reef, although of good width, got reduced in length as stoping proceeded, and gave out about 30 ft. below No. 6 level. In addition to these drawbacks works in the mine were greatly hampered and, in fact, stopped for a short time last summer owing to defective ventilation, consequently it became necessary to effect considerable repairs to the old air-passages. Altogether 360 ft. of surface tunnel, No. 1 level winze-chamber, and 200 ft. of winze, 400 ft. of No. 2 level winze-chamber, and 60 ft. of uprise were retimbered. Since these works were effected the ventilation is perfectly satisfactory throughout the mine, and it is anticipated that further outlay in this direction will not be needed for some considerable time. With a view to augmenting the supply of quartz for crushing a large amount of prospecting was done in the east and west ends of No. 7 level and in the intermediate level, but without anything of permanent value being discovered. In all 116 ft. of main driving, 134 ft. of crosscutting, 94 ft. of an uprise, and 30 ft. of winze-sinking were done in these prospecting operations. At the conclusion of the stoping works it was decided to open up a deeper level (No. 8), but, before doing so, it was deemed advisable to prove the reef underfoot at No. 7 level by means of a winze. This latter was accordingly sunk on the extreme east end of the reef for a distance of 120 ft. The stone varied from 2 ft. to 4 ft. in width, and carried highly payable gold throughout. Its present size in the bottom of the winze is 2 ft. 6 in. wide. Judging from the indications found in No. 7 level and from the promising appearance of the lode in the winze there is every reason to believe that the extent of the reef in the new level will be greater and more permanent than in any of the upper levels. Contracts were let for sinking the main shaft 150 ft., excavating No. 8 chamber, and driving No. 8 level, all at reasonable prices, and the main shaft has just been satisfactorily completed. It is anticipated that about 400 ft. of driving will be required to intersect the line of reef. This should be completed towards the end of May next."

Keep-it-Dark Quartz-mining Company (Limited).—Mr. Hindmarsh, the manager of the company, supplies the following particulars:—"Mine Department: During the year stoping out quartz from No. 4 and No. 5 levels has been continued. In No. 4 level the reef has been fairly regular, keeping about the same size; it is now getting well up to No. 3 level, and about seven stopes (45 ft.) yet remain to be taken out. In No. 5 level, so far as it is worked up, the reef has not been so regular, several breaks having occurred in the lode with mullock in between. From about 40 ft. up one part of the lode has taken a strike away to the east, and this accounts for the quartz which was met with 250 ft. from the main shaft when driving No. 5 crosscut the previous year. A winze has been sunk from No. 5 level at this point and the reef was carried down 116 ft. A crosscut to No. 6 level has been driven 328 ft. from the main shaft; a rise has been put up 30 ft. and connected with bottom of winze from No. 5. About the middle of December the reef was intersected in No. 6 level; it is 30 ft. into the foot-wall from where it was expected to be met with. The reef is 9 ft. thick, and shows very fair gold; it will be some time before the extent of it will be known. For the year 12,313 tons of quartz has been raised and sent to the battery, the total cost of same, including driving of crosscut, two new winding-ropes, and all outlay in connection with the mine and winding-plant (except sinking the main shaft), being £7,904 11s. 10d., equal to 12s. 10d. per ton. The contract for sinking main shaft 300 ft. and constructing two chambers has been completed in a very creditable manner, the total cost being £1,438 16s. 4d., just a small fraction under £4 16s. per foot. The company is now in a position to drive a crosscut from bottom chamber and open up No. 7 level at any time. Battery Department: With the exception of a few days' stoppage early in the year the battery has been running fairly regular, 12,300 tons of quartz has been crushed, yielding 3,641 oz. 15 dwt. 5 gr. of gold, averaging a small fraction over 5 dwt. 22 gr. per ton. The cost of the year's crushing, including maintenance of races and all renewals of crushing plant, has been £1,501 5s.; deducting £59 5s. 11d., which was expended in building extension of wall at head of the water-race, it makes the cost just a little over 2s. 4d. per ton. All the machinery and water-races are in good working-order, and for some time no stoppage for repairs will be necessary. Two improved Wilfley concentrators have been added to the battery plant. They have been working five months and are giving good results, producing about 2 tons of concentrates per week, assay value nearly 5 oz. per ton. The cost of concentrators, including erection, and shed for drying concentrates, amounts to £351 17s. 5d. Cyanide Department: In this department the extraction shows an improvement on the previous year, the amount of bullion obtained being 1,873 oz. 0 dwt. 13 gr., value £5,911 13s. 7d., giving an extraction of a little over 9s. 7¼d. per ton on the gross tonnage crushed. The cost of treatment varies very little from the former year, being £2,270 15s. 8d. This amount includes labour, all materials used, royalty, &c., the cost per ton being a fraction over 3s. 8¼d., thus leaving a profit of 5s. 11d. per ton on the gross tonnage. The first shipment of 24 tons of concentrates, together with a quantity of slimes, has been sent to Australia for treatment. The net returns are not yet to hand, but it is anticipated that the result will be satisfactory."

Blackwater River Gold-dredging Company (Limited).—Mr. A. Johnston Brown, secretary of the company, submits the following report: "During the year the company put into the dredge an electric-light installation. A workshop was also fitted up, and now includes lathe, drilling-machine, engine, and boiler. These items were all paid for out of profits, as also a new screen of novel construction designed to shake up the gravels by providing a 4 in. drop four times in each revolution. The highest return got in any one week was 87 oz. The dredge is a costly one to run, and the necessity of employing two or three men stumping and clearing ground adds materially to working-expenses. The dredge has lately been overhauled, and being at present on good ground it is hoped that dividends will in future be paid at regular intervals."

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Reeves' Proprietary Gold-dredging Company (Limited).—Mr. H. A. Bruce, secretary of the company, supplies the following extracts from the annual report to shareholders:—"The working of the claim for the past year has not been as successful as was anticipated. This result has been brought about chiefly by the poor returns obtained from the No. 2 dredge, and the number of breakdowns which have occurred. However, the later returns from the No. 2 dredge have considerably increased. At the time the No. 2 dredge started No. 1 got off the gold and the returns were much below the average for the preceding year. This dredge has, however, now got on to much better ground, and is giving payable returns. The position of the company during the past year was a very critical one, and in order to carry it on the directors were compelled to issue 2,000 preference shares. These shares were, with few exceptions, taken up by shareholders in the company, and the proceeds expended in paying off the liabilities of the company and in keeping the No. 2 dredge at work until better ground was reached."

Ikamatua Gold-dredging Company (Limited).—Mr. T. W. Ponsonby, the local secretary to the company, reports that the dredge has been run at a loss during the year, the amount of gold won being not even sufficient to pay wages. The company have been put to considerable expense for repairs to breakages. The dredge at present is stopped, having broken her tumbler. The instructions from the Sydney directors are to keep going in the hope of striking the same run of gold being worked by the Blackwater River Gold-dredging Company, and there is a chance of this.

A 1 Gold-dredging Company (Limited).—Mr. E. McRae, the Christchurch secretary to the company, reports that from June to December the dredge was idle consequent on shifting machinery into new pontoons. Repairs and alterations being now effected, it is expected that about the average yield of previous years will be produced.

Statement showing the Comparative Returns from the Quartz Mines in the Reefton District from the 1st April, 1880, to the 31st March, 1901, and a similar Return for the Years ending 31st December, 1901, 1902, 1903, and 1904.

Years ending.	Calls made.			Dividends declared.	Quartz crushed.	Yield of Gold.			Value of Yield.		
	£	s.	d.	£	Tons.	Oz.	dwt.	gr.	£	s.	d.
31st March, 1881	10,218	17	6	19,650	25,926	17,597	14	10	68,630	13	10
„ 1882	25,504	3	4	37,643	14,894	20,154	0	0	78,600	12	0
„ 1883	64,345	0	0	32,600	18,928	19,194	0	0	74,856	12	0
„ 1884	49,456	0	0	16,500	23,433	16,547	0	0	64,533	6	0
„ 1885	29,333	0	0	34,100	34,349	23,997	0	0	93,588	6	0
„ 1886	24,565	0	0	14,500	27,198	14,591	0	0	56,904	18	0
„ 1887	21,596	0	0	33,450	23,930	21,143	0	0	83,171	15	5
„ 1888	30,432	0	0	17,550	24,403	16,775	0	0	66,030	11	5
„ 1889	38,919	0	0	16,688	28,564	18,663	0	0	72,720	18	0
„ 1890	27,531	0	0	18,250	32,394	17,780	0	0	69,676	12	1
„ 1891	20,404	0	0	27,325	39,643	23,347	0	0	91,998	8	10
„ 1892	25,956	0	0	30,743	35,562	23,390	0	0	95,885	5	1
„ 1893	18,800	0	0	16,900	37,693	20,171	0	0	80,894	5	1
„ 1894	14,350	0	0	18,832	34,518	18,413	0	0	73,752	14	11
„ 1895	10,153	0	0	11,012	26,602	13,426	10	0	53,509	5	1
„ 1896	8,418	0	0	25,925	29,816	22,025	0	0	87,935	18	4
„ 1897	9,033	6	8	4,900	13,270	8,365	4	20	33,824	7	1
„ 1898	7,859	3	4	50	9,751	4,266	7	1	18,253	7	3
„ 1899	5,920	6	8	900	42,305	21,487	18	15	87,587	1	0
„ 1900	10,747	8	9	47,050	58,277	26,693	3	18	108,455	17	8
„ 1901	5,826	9	7	35,300	82,618	33,979	5	5	134,557	7	11
31st December, 1901	6,233	6	8	58,199	97,870	46,066	16	12	186,719	6	7
„ 1902	6,900	0	0	63,974	98,485	46,561	9	9	188,655	2	5
„ 1903	4,587	0	0	57,641	109,571	58,840	6	15	195,468	16	10
„ 1904	5,262	0	0	54,674	113,375	49,693	16	7	215,996	3	6
Totals	482,340	2	6	694,356	1,083,575	603,168	12	16	2,382,207	12	4

Westport District.

At the North Beach, on the north-east side of the Orawaiti River, there are about a dozen men engaged in working the sea-sand, but the results are not very satisfactory. If they make £1 to £1 10s. a week they think they are doing well.

Speaking generally as to the claims at Addison's, the prospects for the next few years are good. Although the ground yet to be worked is not very extensive—not sufficient in fact, to give remunerative employment to many men—the few parties that own claims there are, on the whole, doing well.

At Bradshaw's Terrace the ground is almost worked out, and there seems to be very little hope of extending the field in that locality.

The dredging industry has failed in this subdistrict; not one single dredge being now engaged in mining operations.

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The following is a report as to the work done by the different mining parties in this district :—

Virgin Flat Gold-mining Company, Addison's. — This company hold a claim of 100 acres, over which six months' protection has been granted to enable them to make further efforts to raise more capital. During the last year they have done practically nothing.

McCann and party, Addison's Flat.—A small claim of 10 acres, situate on a terrace above Dirty Mary's Creek. This party has been working steadily during the year, but, unfortunately, the results have not been up to expectations. They are trying to strike the lead which yielded some very payable patches of stone during the latter part of the year 1903.

Fletcher and party, Bradshaw's.—This party engaged in working a 15-acre claim by means of cement-crushing. Results only fair.

Lowther and party, Bradshaw's.—An 18-acre claim, worked by cement-crushing. This party is doing fairly well.

Jamieson Kemp and party, Bradshaw's.—Working a 14-acre claim with a two-head battery ; doing fairly well.

J. Collins, Bradshaw's.—A small alluvial claim, almost worked out.

Addison's Long Tunnel Gold-mining Company (Limited) Addison's. — A considerable amount of work is being done on this claim, but the yield of gold last year was not up to expectations, being only 313 oz. This claim is worked as a sluicing claim with an open face.

Millikin and party, Addison's.—This party is working a 20-acre claim by means of hydraulic sluicing and cement-crushing. They have a ten-head battery driven by a Pelton wheel. Last year the returns proved very satisfactory, and the prospects continue good.

Senior and party, Addison's.—A 20-acre claim. This party were engaged last year in working some old hopperings by means of cement-crushing. They have a twelve-head battery driven by a 30 ft. overshot wheel. Results of last year's work fairly successful, and a good area of fairly payable ground lies in front of them.

P. Halligan and party, Addison's.—An alluvial claim of about 10 acres. Returns unsatisfactory ; prospects not good.

Carmody and party and Neill and party, Addison's.—These two claims are situate on the Towa Lead, Addison's, and are of an area of 22 acres and 25 acres respectively. They are worked by means of open-faced sluicing, and continue to give very good returns. There is a considerable area of good ground in front of each party.

Johnson and party, Cascade Creek.—A small quartz claim of 10 acres. Very inaccessible. Prospects not good.

Davis Bros., Fairdown.—Engaged just now in bringing water to claim.

Crawford and party, Fairdown.—A small alluvial claim of 6 acres. Making wages.

Charleston District.

The Charleston Beach Sluicing Company of Auckland (Limited).—This company commenced sluicing operations on their beach claim about March last, and continued working up to the end of the year. The company gave employment to seven or eight men during the whole of the time. The results appear to have been satisfactory, as there is every indication that work on the property will be continued in the future.

Powell's Sluicing and Elevating Claim.—This claim was systematically and, I believe, most profitably worked during the greater portion of the year, and there is every prospect of its continuity being maintained in the future, as the property has been thoroughly prospected. The work provides employment for eight or nine men.

The Argyle Water-race.—This property was recently taken over by the Buller County Council, as the previous lessees had failed to keep it in proper repair. As the result of this neglect it was continually breaking away, occasioning thereby loss of work to the miners. The present lessee (Mr. Patrick Walsh) has given the place a thorough overhaul, renewing the flumings, &c., with the result that he is now able to let the other miners in the locality have the water at a reasonable rate, whilst the responsibility of keeping the race in repair rests with himself.

The other smaller claims have worked in this locality during the greater portion of the year, with only moderate results. The majority of the miners are old men.

The beach claims on the Nine-mile Beach, of which there are about twenty, are each worked by one or two men, who have been doing steady work, with good results.

Altogether, mining generally compares more than favourably with the previous year.

Lyell and Murchison Districts.

Dredging.

At the commencement of the year there were six dredges at work on the Buller River, between Lyell and Westport ; one on the Upper Buller at Fern Flat ; and one dredge at work, and one in course of erection, on the Matakitaki River above Murchison.

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Four of the dredges on the Buller River, namely, the Feddersen, Fern Flat Proprietary, Premier, and Welcome were sold during the year owing to the liquidation of the companies owning them.

The Feddersen dredge, now owned by the New Feddersen Gold-dredging Company (Limited), was, in June last, removed up opposite the mouth of New Creek, and, since commencing operations there, 687 oz. of gold, valued at £2,699, have been won, and dividends amounting to £809 have been paid. As this dredge (which is a powerful one) is now on good gold, and well adapted for working the rough ground on the Buller, the prospects of the company certainly seem bright.

The Premier dredge, now owned by Messrs. Hansen and Della Vedova, was, with great difficulty, removed from the Inangahua Junction to Three-channel Flat, where, after being aground for some time, it received a thorough overhauling, and is now engaged opening out a face.

The Welcome dredge, now owned by Walker and party, obtained very little gold during the first eight months of the year, and, as a consequence, the company was wound up and the dredge sold to the present owners, who had hardly taken possession when their dredge sank. Up to the present it has not been refloated.

The Fern Flat Proprietary dredge (now owned by Bredbury and party) is at present working on Bredbury's freehold, and, although no returns are published, they are believed to be satisfactory. It is a pity that a better dredge is not working this ground, for, if it pays to work the ground with the present dredge in spite of the numerous breakages, it would certainly pay handsomely if a first-class dredge were to work it.

The Buller Junction dredge, which in 1903 did so well, has not done very well during 1904, and at a meeting in December it was decided that the company should go into liquidation.

The Mokoia dredge, working some three miles higher up than the Buller Junction, did not do nearly so well during 1904 as during the previous year, 439 oz. of gold only having been obtained, against 1,434 oz. during 1903. The dredge is now in the same locality as when it obtained the good returns last year, and larger returns may be expected in future.

The Rocklands Beach dredge, working near Berlin's, obtained 902 oz. of gold during 1904, as against 498 oz. in 1903, and the ground appears to be improving. No dividends were declared. This dredge has now left the old claim and commenced operations on the claim adjoining, granted to the company during the year.

The Old Diggings dredge, owned by Hansen and party, is still working below Berlin's, and the returns are believed to be satisfactory.

The Belle Vue and Kohikohi dredges, working on the Matakitaki River have not met with a great deal of success during the year, and it would appear that the ground up the Matakitaki is not rich enough to pay for dredging.

The Amikitia dredge is still lying idle up the Matakitaki River.

Quartz.

The Alpine Extended Company's operations for the year consisted in extending No. 12 level south to a distance of 520 ft. from the shaft, in crosscutting to the hanging-side, and in stoping a block of stone up 70 ft. between level No. 12 and level No. 11. No. 12 level north was also extended a distance of 470 ft. from the shaft. A block of stone 83 ft. in length was met and was stoped up for a distance of 70 ft. when it cut out. In No. 7 level a considerable amount of crosscutting has been done to the foot-wall. In No. 10 level a distance of 150 ft. has been driven, and a contract let to extend a rise to No. 7 level, a distance of about 230 ft. In No. 12 level south some large boulders, showing good gold, were met with, but nothing permanent was found.

Kelly and party—working at the Eight-Mile—after seven months' dead-work cleaned up at the end of the year for 168 oz. of gold. The party consists of four men, and, taking into consideration the amount of dead-work done, the return may be considered satisfactory. There is no other quartz-mining done in this district.

Alluvial.

During the latter portion of the year there were signs of a revival in sluicing up the Matakitaki and Maruia Rivers.

At the Horse Terrace, Matakitaki, an Auckland company, named the Horse Terrace Sluicing Company (Limited), have acquired all the mining privileges of McDowell Bros., consisting of two 20-acre special claims, water-races, &c. The company have also completed a large water-race which they have brought in from the left-hand branch of the Glenroy River to their prospecting-area at Horse Terrace. The first wash-up took place shortly before Christmas, and it is said to have been satisfactory. This company expects to have 150 men employed shortly.

Up the Maruia several 20-acre special claims have been taken up by small parties, and are now being worked with good results. Thomson and party are bringing in a large water-race to enable them to work their claims to better advantage.

The New Lyell Sluicing Company (Limited) are carrying on operations about four miles below Lyell, but have not got fairly to work yet on account of opening a new face and altering their water-race.

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Ahaura District.

Moonlight.—The population of this district is about the same as it has been for the last two years. The Moonlight Gold-dredging Company have their dredge still working in Moonlight Creek, but the returns are not encouraging, the ground is rough and somewhat difficult to work. The New Shetland Terrace Claim at Upper Moonlight is in good working-order, and, with plenty of water, should get a fair amount of gold.

Blackball and Healey's Gully.—The number of gold-miners in these districts keeps about the same, and a considerable amount of gold is being won. The Republic Company, Hindman and party, Kerr and Hay, and the Montgomery Terrace Company are the most important holders of mining privileges at Upper Blackball and Healey's Gully. The Paparoa Ranges have had a considerable amount of attention in the prospecting for quartz, and the Garden Gully Quartz-mining Company have been carrying on extensive prospecting operations. They are now erecting a battery, and should good results be obtained the venture will be the means of bringing the Paparoa Ranges into prominence.

Nelson Creek.—The dredging industry in this locality is about the same. There are six dredges at work and two in course of construction. Alluvial mining gives employment for about fifty men, most of whom are making good wages.

No Town.—There are very few alluvial miners in this locality, but the dredges (three in number) on the No Town Creek are getting very good returns, and have a considerable area of land to work.

Waipuna, Including Mosquito Creek and Noble's.—The population remains about the same, mostly following alluvial mining. The two dredges in Mosquito Creek have gone into liquidation. The Mosquito No. 1 always got good returns and paid several dividends, but the claim is now worked out.

Duffer's and Half-ounce.—There are only a few old hands following up mining in this locality. The two dredging companies, Sullivan's Lead and Golden United, have gone into liquidation.

Ahaura River.—The usual number of sluicing parties continue to work on the banks of the river. During the past year the supply of water has been very limited, and the miners have to purchase the water from Messrs. Currie, who hold the main water-rights. If water could be obtained to work some of the higher terraces and levels the general opinion is that there is plenty of payable ground around Ahaura to work by sluicing.

Orwell Creek.—The population in this district is dwindling down to a low ebb. There is no water in this locality for sluicing. Some time ago it was proposed by a Reefton party to bring in water from Randal Creek and Allen River to sluice Napoleon Hill. Should this be done the place would go ahead again, as plenty of payable sluicing-ground is available.

Timber.—The timber industry in the Ahaura Warden's district is going ahead very fast, the amount of timber being cut is about 500,000 ft. a month, and in a short time an output of double that amount may be looked for.

Greymouth District.

Alluvial.

Sluicing operations in this district have been of a very limited nature for some time past. The only locality in which any extensive operations are being carried on is at Barrytown, where Messrs. McKay and White are obtaining very satisfactory results from their venture. The Nine-mile Company was wound up during the year and the property transferred to the New Nine-mile Sluicing Company, but no work of any importance has been done.

In other portions of the district mining operations are carried on as usual by the ordinary individual miners, whose number now is gradually diminishing.

Dredging.

Table A appended hereto contains particulars relating to twenty-six dredging companies having dredges in actual work in my district during the year. Of these only eight—as specified below in Table B—have paid dividends during the year. Table A also refers to the following companies which have worked dredges, but during the year have ceased work owing to the poor nature of the ground and difficulty in working same: Buller Junction, Golden United, Sullivan's Lead, Trafalgar, and Waimangaroa River. Since the end of the year the Totara Flat and Stony and Mosquito Leads dredges have been closed down. The latter having been sold and repurchased will shortly be again in active operation.

In my last report I referred to three dredges—viz., Boatman's Creek, Golden United, and Moonlight, as not having at that time worked sufficiently long enough for an idea to be formed as to the value of the properties. Of these the Boatman's Creek and Golden United have been closed down during the year, while the Moonlight has been barely earning working-expenses.

Taking the gold yield shown in Table A—viz., 23,557 oz., and estimating the value at £3 19s. per ounce, the gross value of gold won by the twenty-six dredges approximately amounts to £93,050. Out of this the sum of £13,885 has been distributed in dividends during the year amongst shareholders in eight companies, leaving about £79,164 to cover working-cost, &c.

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Table A.—List of Companies having Dredges actually at Work on their Claims during the Year 1904.

Name of Company.	Present Capital at Par of Company on which Dividends are payable.	Borrowed on Debentures, Overdraft, or otherwise.	Location of Dredge.	Date of Completion of Dredge.	Number of Hours worked from 1st January, 1904, to 31st December, 1904.	Number of Ounces of Gold won from 1st January, 1904, to 31st December, 1904.	Total Amount declared in Dividends to Shareholders.
	£ s. d.	£ s. d.				Oz. dwt. gr.	£ s. d.
A1 Gold-dredging Company (Limited)	8,500 0 0	1,548 3 4	Redman's Creek, Cronadon ..	June, 1901 ..	..	654 14 0	2,125 0 0
Aldinga Gold-dredging Company (Limited)	9,000 0 0	1,218 16 0	Nelson Creek	July, 1902 ..	..	782 6 14	..
Belle Vue Gold-dredging Company (Limited) ..	3,400 0 0	1,554 11 1	Murchison, on Matakitaki River ..	June, 1903 ..	1,984	363 8 0	..
Bignell's No Town Gold-dredging Company (Limited)	9,000 0 0	..	No Town Creek	January, 1904 ..	..	1,406 13 12	900 0 0
Blackwater River Gold-dredging Company (Limited)	9,475 0 0	..	Grey Valley, Westland	23rd January, 1903	..	1,753 6 17	3,316 5 0
Buller Junction Gold-dredging Company (Limited)*	9,375 0 0	1,181 0 1	Buller River, near Inangahua Junction	28th January, 1901	3,182	439 11 0	..
Callaghan's Creek Gold-dredging Company (Limited)	9,375 0 0	..	On Callaghan's Creek	8th March, 1902 ..	5,974	1,193 11 0	1,875 0 0
Donovan and Cullman (on tribute from Boatman's Gold-dredging Company)	550 0 0	..	Boatman's Creek, Capleston ..	..	1,200	106 12 0	..
Golden United Gold-dredging Company (Limited)* ..	14,000 0 0	..	Duffer's Creek	4th July, 1903 ..	..	..	..
Greymouth Lagoons Gold-dredging Company (No Liability) (now Ikamatua)	8,642 10 0	2,002 6 4	Near Junction, Blackwater Creek ..	August, 1902 ..	4,724	428 8 9	..
Jamieson's Reward Gold-dredging Company (Limited)	9,990 0 0	..	Nelson Creek, beside Pactolus ..	6th August, 1903 ..	5,220	1,080 3 5	999 0 0
Kohikohi Gold-dredging Company (Limited) ..	14,667 0 0	1,000 0 0	Matakitaki, above Murchison ..	3rd September, 1901	..	631 18 0	..
Mokoia Gold-dredging Company (Limited)	9,000 0 0	..	Buller River, Three-channel Flat ..	13th October, 1900	..	871 0 0	1,925 0 0
Mosquito Gold-dredging Company (Limited) ..	10,000 0 0	..	Mosquito Creek	November, 1901 ..	..	1,338 15 15	1,500 0 0
Moonlight Gold-dredging Company (Limited) ..	10,000 0 0	1,537 5 2	Moonlight Creek	7th August, 1903 ..	..	816 15 3	..
Nelson Creek Gold-dredging Company (Limited) ..	8,500 0 0	..	Nelson Creek	8th December, 1900	5,988	3,449 15 9	23,375 0 0
North Beach Gold-dredging Company (Limited) ..	8,325 0 0	..	North Beach, Greymouth	April, 1902 ..	†	879 6 13	3,330 0 0
No Town Creek Gold-dredging Company (Limited) ..	12,000 0 0	..	No Town Creek	19th December, 1901	5,195	1,572 15 17	10,800 0 0
Pactolus Gold-dredging Company (Limited) ..	9,375 0 0	..	Nelson Creek	No. 1 Dredge, 26th February, 1902; No. 2 Dredge, 3rd September, 1902	5,492 5,814	2,411 19 6	2,812 10 0
Reeves' Proprietary Gold-dredging Company (Limited)	14,200 0 0	2,500 0 0	Boatman's Creek, Capleston ..	No. 1, November, 1900; No. 2, March, 1903	7,775	963 18 15	610 0 0
Rockland's Beach Gold-dredging Company (Limited)	11,672 0 0	..	Buller River, below Inangahua Junction	February, 1901 ..	3,981	902 0 0	..
Stony and Mosquito Leads Gold-dredging Company (Limited)	11,375 0 0	297 15 0	South Beach, Greymouth	4th September, 1902	3,960	976 0 0	..
Sullivan's Lead Gold-dredging Company (Limited)* ..	12,000 0 0	..	On Sullivan's Creek	..	..	..	..
Totara Flat Gold-dredging Company (Limited) ..	5,007 0 0	2,000 0 0	Totara Flat, on Brandy Jack's Creek	15th November, 1901	4,735	534 7 0	..
Trafalgar Gold-dredging Company (Limited)* ..	9,000 0 0	1,218 16 0	Nelson Creek	..	..	..	..
Waimangaroa River Gold-dredging Company (Limited)*	12,000 0 0	..	On Waimangaroa River (twelve miles from Westport)	..	..	..	..
Totals	248,428 10 0	16,058 13 0	..	..	..	23,557 5 15	53,567 15 0

* In liquidation. † All the year, except stoppage for repairs.

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Following is a list of companies which have paid dividends during 1904, showing amount paid during the year and also since date of formation :—(*Table B.*)

Name of Company.	Number of Shares.	Value of each Share.	Dividends, 1904.	Total Dividends.	Dividends per Share, 1904.	Total Dividends per Share.
	£	£ s.	£ s. d.	£ s. d.	s. d.	£ s. d.
Bignell's No Town	9,000	1 0	900 0 0	900 0 0	1 0	0 1 0
Blackwater River	9,475	1 0	1,895 0 0	3,316 5 0	4 0	0 7 0
Callaghan's Creek	12,500	0 15	625 0 0	1,875 0 0	1 0	0 3 0
Jamieson's Reward	9,990	1 0	499 10 0	999 0 0	1 0	0 2 0
Nelson Creek	8,500	1 0	7,437 10 0	23,375 0 0	17 6	2 15 0
North Beach	8,325	1 0	416 5 0	3,330 0 0	1 0	0 7 0
No Town Creek	12,000	1 0	1,800 0 0	10,800 0 0	3 0	0 14 0
Pactolus (two dredges)	9,375	0 15	312 10 0	2,812 10 0	0 8	0 4 8

The following schedule shows the yield, working-cost, &c., of the twenty-six dredges of 1904, comparing them with that of the thirty-four dredges at work during the previous year :—

Year.	Number of Dredges.	Yield of Gold.	Approximate Value.	Approximate Working-cost.	Average cost per Dredge.	Amount paid in Dividends.
		Oz.	£	£	£	£ s. d.
1903	34	27,426	108,332	81,574	2,399	26,758 5 0
1904	26	23,557	93,050	79,164	3,044	13,885 15 0

It will be noted that there is an increase of £645 in the average working-cost of each dredge. It may be questioned as to the cause of this great increase. It is quite natural to expect that most of the dredges, having been working now for some years, are more liable to breakages than formerly. Also in cases of recently built dredges, ill-adapted machinery has often been used, occasioning much expense and loss of time in repairs.

Out of the twenty-six companies having dredges working during the year, five went into liquidation, compared with six out of thirty-four during the previous year. In 1903 eleven companies paid dividends to shareholders, amounting to £26,758, while this year the number of dividend-paying companies has been reduced to eight, the amount distributed in dividends being reduced almost one-half.

The Nelson Creek still heads the list of dividend-paying companies. Original shareholders in this company have been exceedingly fortunate in having already received back 275 per cent. on the money invested by them. The returns from the dredge were fairly good until about the middle of the year, when they fell away considerably, and at present they cover little more than working-expenses. This company has recently purchased the Teremakau dredge with the object of working a lately acquired property adjacent to their present claim.

The No Town Creek dredge has not been so successful, the amount paid in dividends being only about 27 per cent. of that paid during the previous year. But the company has recently purchased the dredge and claim of the No Town No. 2 company, and two dredges are now being worked with payable results.

The Pactolus Company, after constructing a second dredge, has already paid almost 5s. per share in dividends, and as both dredges still continue to obtain good returns, the prospects of this company are evidently very bright. It is expected that highly payable returns will be obtained while that portion of the claim near Try-again Terrace is being worked.

Another claim of much promise, situate alongside the Pactolus Company's claim, is the Jamieson's Reward. This company has already paid 2s. per share in dividends, and still continues to obtain good results. The dredge, however, was second-hand when purchased by the company, and they have been put to a great deal of expense and loss of time through breakages; but these defects have now been remedied, and shareholders are confident of an increase of dividends without the former expense of working.

The Bignell's No Town dredge, during the short period of operations, has done remarkably well, the company having already paid 1s. per share in dividends, as well as wiping off their overdraft and creating a reserve fund.

The Callaghan's Creek company, owing to the narrowness and roughness of their claim, were compelled to build a very small dredge, which, taking all these difficulties into consideration, has given good results during the year. This dredge still obtains payable returns, but, owing to the difficulties before mentioned, it is not probable that any sensational returns will be forthcoming.

The North Beach dredge did not fulfil the expectations which were held out during the early part of the year. It was hoped that, as the ground towards the upper end of the claim was being worked, the returns would increase. But unforseen difficulties in the form of submerged timber and scarcity of water during the dry season were responsible for a falling-off in the returns. However, shareholders are very sanguine as to the future prospects of this company.

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By referring to former reports it will be noted that the number of working-dredges is gradually declining every year, and it is very probable that th decline will continue until we have none but the actual dividend-paying dredges at work in this district. Amongst the number of dredges mentioned in Table A there are several which are barely earning working-expenses, and I expect that in next year's report they will be mentioned as having closed down during the year.

The Timber Industry.

The exports of timber and railway-sleepers for the year from the Port of Greymouth was as follows: Timber, 21,218,043 ft., valued at £74,263; sleepers, 2,081,006 ft., valued at £14,492: total, 23,299,049 ft. valued at £88,755.

Coal.

The output of coal from the different mines during the year was as follows: Blackball Mine, 85,528 tons; Brunner Mine, 54,939 tons; Tyneside Mine, 38,406 tons; State Mine, 60,255 tons: total, 239,128 tons. This is a considerable increase on last year's output, owing to the opening-up of the State collieries during the year.

General.

The number of suits disposed of in the Warden's Court during the year ending the 31st December, 1904, was fifteen.

The revenue for the year amounted to £3,613 16s. 4d, the particulars of which are as follows: Miners' rights, £106 5s.; copies of Mining Act, 15s.; water-races, £2; rents, £1,158 19s. 1d.; fees and fines, £64 5s. 6d.; miscellaneous, £2,281 11s. 9d.: total, £3,613 16s. 4d.

I have &c.,

The Under-Secretary, Mines Department, Wellington. W. G. R. Kenrick, Warden.

Mr. Warden Day, Hokitika, to the Under-Secretary for Mines, Wellington.

Sir,— Warden's Office, Hokitika, 28th February, 1905.

In pursuance of the request contained in your circular I have the honour to report with respect to the Hokitika division of the Westland Mining District that was under my charge during the year 1904.

Alluvial Mining.

Through the action of creditors, the Wheel of Fortune Company was forced into liquidation, and the mortgagees sold the whole of the mining rights owned by the company to a local syndicate. The syndicate commenced work, and I am informed the returns up to the end of the year were satisfactory. It would appear that under the company (which was owned and controlled in England) the expenses of management were out of all proportion to the returns which were likely to be obtained from the property. It is this excessive and extravagant cost of management of foreign-owned companies which kills the ventures owned by them.

The Humphrey's Gully claims were worked on tribute during the year, with results satisfactory to the tributers. The tribute expired at the end of last December, and tenders were again called for by the company, with the result that the same party again obtained the tribute, the company receiving a larger percentage than that paid during the previous period.

The Mont d'Or claim, at Ross, was worked throughout the year and paid its usual dividends. The company sustained a great loss by the death of Mr. Charles Davey, who had successfully managed and worked the claim for a number of years.

The Ross United and Mont d'Or properties are still under offer to a London syndicate, but for some reason nothing much has been done, although the local company some time since provided the amount asked for to pay the expenses of an expert to be sent out from London to report upon the properties.

The Westland Hydraulic and Sluicing Claims at the Waiho were worked for a great part of the year, but the results were not made public. Work was stopped, and six months' protection obtained, owing to the working capital being exhausted. I believe, however, that fresh capital is forthcoming, and that the claims will shortly be worked again. The manager informed me that when work ceased the prospects were encouraging.

The claim held by the McLeod's Terrace Sluicing Company to the south of the Mikonui River, should be working in a month or two, as the head race is approaching completion. The result of working this claim is looked forward to with a great deal of interest, as a number of old and experienced miners are doubtful of its being successful.

Back Creek and Seddon's Terrace: During the year it was reported that a new lead had been discovered at Back Creek, underlying the old Brighton bottom. A fair number of claims were applied for. I visited the field with the Assistant Inspector of Mines, Mr. A. H. Richards, to, if possible, satisfy myself as to the value of the lead before granting any licenses for claims. As at the time of our visit sufficient work had not been done to prove its value I refused to grant any claims, and the various applicants took prospecting licenses instead. This discovery (if satisfactory) will probably extend indefinitely the life of the field. So far I have not heard the result of any prospecting.

Great disappointment has been felt throughout the district because nothing definite has yet been done towards bringing water on to this field. The trial surveys for the race have been finished for some time, and there the matter seems to rest. The Consolidated Goldfields of New Zealand has, however, obtained permission to prospect the reserve of 100 acres at Seddon's Terrace, and I understand that upon the results of the prospecting partly depends the decision as to whether the company will construct the race or not.

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Since Christmas the miners on this field have been for the greater part of the time idle, as there has not been a sufficient rainfall to give anything like an adequate supply of water.

Dredging.

It cannot be said that any of the dredges in this district have been successful.

The Kohinoor, at Ross (of which great results were expected), went into liquidation, and the property was sold to a syndicate.

The Prince of Wales was let on tribute, as the company could not make it pay. Since starting work the tributers have done fairly well.

The Montezuma was sold to satisfy wages liens. The new owners can get no satisfactory returns.

The Wanganui Wataroa has closed down, as the tributers could not make it pay. It is a source of wonder to the old residents in the neighbourhood how it was that the dredge was ever placed on the claim.

The Woodstock is still at work, but hardly getting enough to pay working-expenses.

The Greenstone Creek dredges are working, but not paying dividends.

Owing partly to ill-luck and partly to unforseen difficulties the dredge that was to have been placed on the Five-mile Beach below Okarito is not yet constructed.

Quartz-mining.

During the summer a good amount of prospecting has been done in the vicinity of Brownings' Pass. Owing to its altitude very little could be done before the greater part of the snow had disappeared. Several prospecting licenses and special claims have been applied for, as well as water-rights and other mining privileges.

On Wilson's Reward Claim a tunnel is being driven about 130 ft. below the outcrop of the reef that was found, and it is hoped that the reef will shortly be met with. From the prospects obtained on the surface, the find should be a valuable one if it be proved that the reef lives down and maintains its size and value.

Next summer should see a much greater amount of prospecting done in the back country.

Prospecting.

Towards the end of the year a very useful movement was started by the Ross Borough Council which eventually led to a meeting of delegates from all the public bodies and prospecting associations in Westland being held in Hokitika for the purpose of forming an association for placing prospecting on a scientific and businesslike basis. With the assistance of the Government and of the newly appointed Colonial Geologist it is hoped that the working of the new association may result in a revival of the mining industry in this district.

Timber.

During the latter months of the year, owing to the demand for timber falling off, several mills were obliged to cease work. Those which continued working were to a great extent kept going by reason of the increased demand for white-pine for shipment to Australia.

I have, &c.,

The Under-Secretary Mines Department, Wellington. Victor Grace Day, Warden.

Mr. Warden Keddell, Oamaru, to the Under-Secretary for Mines, Wellington.

Sir,— Warden's Office, Oamaru, 17th April, 1905.

I have the honour to report with respect to the Livingstone subdistrict of the Otago Gold-mining District that the mining industry in this locality has remained stagnant during the past year, no notable feature having occurred. The population of Livingstone proper and Maerewhenua remains about the same, and as far as ordinary settlement is concerned the district shows signs of material progress.

The principal source of supply of water, the Mountain Hut Water-race, has had several unforseen misfortunes which have impaired its usefulness. The race (which conveys its water from a considerable distance in the hills in an open ditch made in the face of the mountains) has been damaged by breaks caused by the slipping-away of the lower side of the race. Repairs are made with difficulty and considerable expenditure of labour, and in consequence of these accidents there has been a shortage of water.

The failure during the past year of the anticipated supply of water has been very regrettable, as there is a large area of ground lying idle which could and would have been profitably occupied if water was obtainable. The race-proprietors could find ready sale for 20 heads if they could deliver that quantity. I am satisfied the enterprise was a good and sound one, and that there would be for some time a great demand for a large supply of water if it could be made constant. The manager is capable and energetic, and the accidents referred to could not be provided against. The maintenance and distribution of this water employs about twenty-five men, but the sale of its present limited supply affords little or no profit to the proprietors.

The records of the Warden's Court show that work is continued with vigour by the small number of miners engaged.

I have, &c.,

The Under-Secretary, Mines Department, Wellington. Jackson Keddell, Warden.

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Mr. Warden CRUICKSHANK, Dunedin, to the UNDER-SECRETARY FOR MINES, Wellington.

SIR,— Warden's Office, Dunedin, 3rd March, 1905.

Herewith I have the honour to enclose my annual returns for the Hindon district, and at the same time to report that no fresh operations have been commenced during the past year. Excepting that of the Deep Stream Amalgamated Hydraulic Sluicing Company (Limited) and the Barewood Gold-mining Company (Limited) there has been little or no work done in this portion of the Otago Mining District.

I have, &c.,

The Under-Secretary, Mines Department, Wellington. G. CRUICKSHANK, Warden.

Mr. Warden MCENNIS, Naseby, to the UNDER-SECRETARY FOR MINES, Wellington.

SIR,— Warden's Office, Naseby, 17th April, 1905.

I have the honour to forward herewith statistical mining returns for the year ended the 31st December, 1904. I also forward a few notes on the position of this goldfield for the same period.

NASEBY.

At Naseby and immediate surroundings eighteen hydraulic-elevating claims have been working during the year; two of these have been worked out. Hydraulic sluicing and elevating is the chief method of gold-mining in this district, and there are about fifty men employed. Some fifteen parties are ground-sluicing, and about forty Chinese similarly employed. At Idaburn, White Sow Valley, and Hill's Creek a claim is being worked at each place; it is estimated that there are about 140 miners (including Chinese) working in the above-named localities.

ST. BATHAN'S.

The last season proved a fairly good one for many employed in mining. The returns obtained were fully up to the average, while at the close of the year a general improvement all round was noticeable.

In what is known as the town or basin workings—those that discharge their tailings and tail-water into the St. Bathan's Channel and thence into the Dunstan Creek—the only workings of importance carried on during the year were those of the United M. and E. Company. After considerable trouble this company succeeded in getting an elevator in position about the end of March, and operations have been carried on constantly since with the exception of a few weeks in the winter-time, and as a result a large amount of quartz wash has been shifted. It is gratifying to be able to state that fully 600 oz. of gold was obtained. This company intends to deepen their elevator 35 ft. more, making there a total depth of 60 ft. As the company have water at a pressure which can easily lift from depth of 150 ft. it is obvious that even this small portion of the claim will give rich returns for many years to come.

Work on the St. Bathan's Channel has been carried on, and an additional 6 ft. has been sunk during the past year.

The Scandinavian Company has been mostly working its claims known as Surface Hill and Lagoon, the tailings from which are carried into Muddy Creek and from thence into the Manuherikia River. Work was carried on by hydraulic elevating. At Surface Hill Claim, after deepening and shifting the elevator five times, a depth of 104 ft. was reached in March, and two elevators were erected side by side, so that whilst repairs were being effected on one the other could be kept at work. The paddock was washed up in August for a return of 1,300 oz. of gold. The elevator has since been shifted and deepened to a depth of 119 ft., and is working very satisfactorily. It is now in a position where it can work for five years without the necessity for shifting, and it is confidently expected good returns will be obtained. The manager estimates that 643,000 yards of material were removed, the ground thus giving about a grain of gold to the cubic yard. At the Lagoon Claim great difficulties have been encountered; the country (which is of a greasy-clay formation) has slipped for several chains against its own dip, and the manager so far has been unable to touch the wash, but he expects to obtain a good hold of the ground before the coming winter. An elevator is at work to a depth of 35 ft., but has been several times carried away by slips of clay. One of these slips was of such an extent that it took two months to remove. It is to be hoped that when the wash can be got out the company will be recouped for their labour.

The Shamrock Company's Claim is idle at present, but it is expected a start will soon be made to work the quartz drift at what is known as Brennan's, from which good payable yields have already been obtained.

At Vinegar Hill the principal operations have been carried on by the Vinegar Hill Hydraulic Sluicing Company, and have been very successful during the latter part of the year. The clearing of the side of the hill was completed in August last, and a start to work at once made to sink an elevator. This work was much impeded through the presence of a number of large stones which had been packed in by a former party when driving the ground in order to hold it up. At present, despite of all these hindrances, the elevator is now down to a depth of 70 ft., and henceforward will have only virgin ground to operate on. A return of 560 oz. of gold has been obtained since October, and after liquidating all debts on claim a dividend of 2s. per share has been paid to the shareholders. There is little doubt that this claim is a valuable property, and good returns may be expected for many years to come.

Two men named O'Hara and McCarthy are working an adjoining claim, and are said to be obtaining satisfactory results.

At Cambrian's work is being carried on by five parties sluicing, and they seem satisfied with their earnings.

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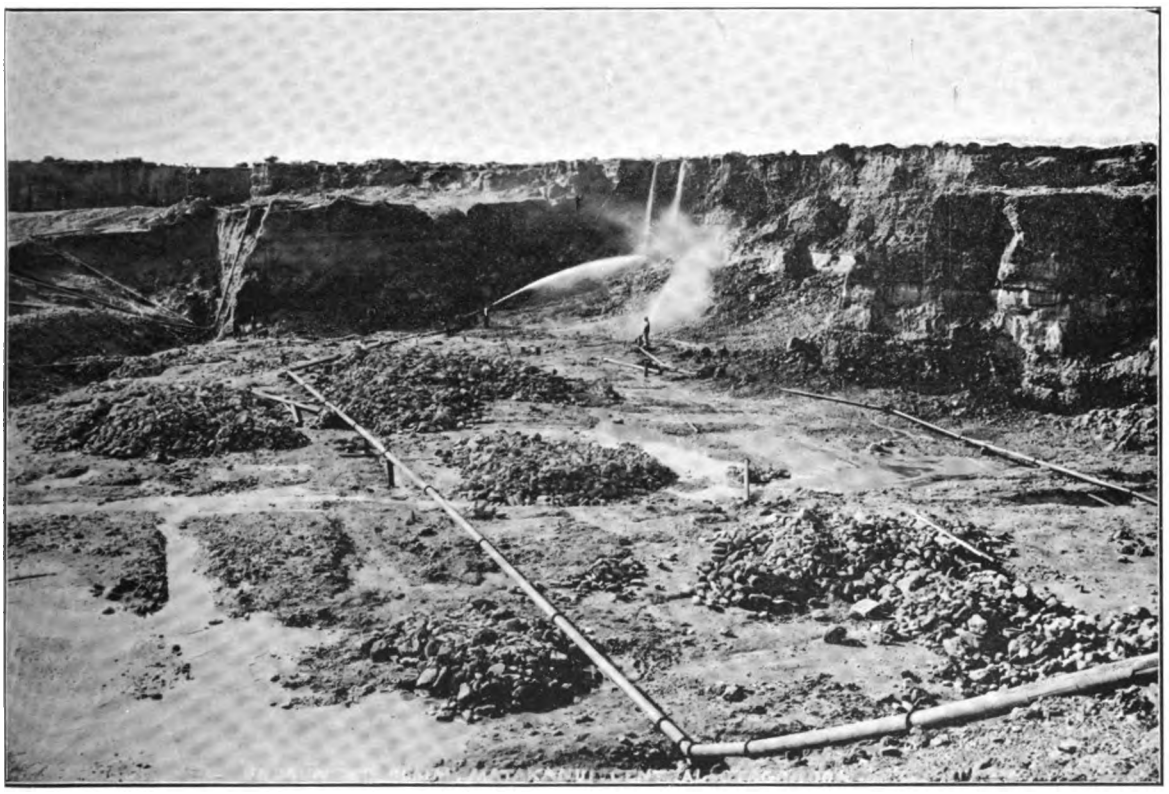
SCANDINAVIAN GOLD-MINING COMPANY'S CLAIM, ST. BATHAN'S, OTAGO. SLUICING AND ELEVATING.



UNDAUNTED GOLD-MINING COMPANY'S CLAIM, MATAKANUI, OTAGO. SLUICING AND ELEVATING.

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Matakanui (Tinkers).

The Undaunted Gold-mining Company holds 114 acres of ground. The depth of the face where work is being carried on at present is about 43 ft. From the bottom for 20 ft. up, the ground is composed of a heavy water-worn wash, with a good deal of hard boulders intermixed with the washdirt. The ground is elevated to a height of 57 ft., and the stones and *débris* are stacked on the worked ground; 95 per cent. of the gold is saved in boxes before the wash is put through the elevator. There is also a line of boxes on top to catch what gold escapes from below; the average saved in top boxes is about 5 per cent. The gold won for the past year amounted in value to £2,758 10s., and dividends amounting to £750 were paid. This company since March, 1898, has paid in dividends £10,500. The nominal capital is £20,000, of which £15,000 is paid up and £5,000 is held in reserve. An electric-lighting plant has been installed on the claim, which enables the work to be carried on to much greater advantage during the night-time than when kerosene-lamps were used. The water was very scant during the first three months of the year, and this considerably retarded the work on the claim. The average number of men employed on the mine was ten.

The Matakanui Gold-mining Company: This company is working a claim on the flat land between the Undaunted and the Tinker's Gold-mining Companies' claims; the depth of the ground being worked is about 65 ft. They sluice off about 20 ft. of the top dirt and elevate the remainder about 45 ft. The ground is fairly rich in places. The capital of this company is £7,000 in £1 shares. The average number of men employed is seven.

The Mount Morgan Gold-mining Company (capital, £2,800, in £1 shares): This company hold 100 acres of land on Smokers and Tinkers Flats; the depth of the ground is about 20 ft., and it is elevated to a height of 25 ft. The ground is of a light nature and contains fair gold. The average number of men employed is four.

Tinkers Gold-mining Company: This company has obtained 940 oz. of gold for the past year, having declared dividends amounting to 3s. 3d. per share for the year. The company declared in dividends since 1902 a shade over a quarter of the capital. The company is working in the portion of the claim known as the Deep Lead; it is in what is locally termed the "granite formation," and the depth is unknown. Some years ago a company prospected the ground 240 ft. deep, obtaining as high as 6 gr. to the dish in some seams, and proved the claim to be auriferous and payable to the above depth.

Macrae's Flat.

Golden Bar Quartz-mine: This mine has had a very successful year, and returned good dividends to the shareholders, who are a working party. Towards the end of the year an arrangement was made with an outside party to buy the tailings and treat them with cyanide. The party have been operating on stone which contains a fair percentage of scheelite, which they are saving and dressing for shipment. The party are putting an oil-engine and better dressing appliances, consisting of Union vanners.

Lidstone and party have started operating in the Ounce Claim, but as they only began a short time before the end of the year, they have not yet had a return.

The Bonanza Mine was not worked during the year.

The Highlay Mine and battery changed hands during the year, but little has been done since.

A large area of ground has been taken up near the Highlay Mine by a party who are putting in machinery, and a company is being registered, to be called the "New Zealand Gold and Tungsten Company." Messrs. W. and G. Donaldson, experienced and successful quartz-miners, are the principal shareholders in this company.

Golden Point Mine: The new battery was got to work during the year, and a low level drive put in 400 ft., disclosing a large body of good stone, and containing rich bunches of scheelite. A considerable amount of scheelite has been shipped to Germany during the year, which realised as high as 35 marks per unit, which, on 70 per cent. ore, the usual percentage the ore is dressed to, is equal to £122 10s. per ton.

In alluvial mining at Macrae's there is less and less being done each year, and few Chinese are able to make a living. At Hyde, Middlemarch, Kyeburn, Serpentine, and Patearoa, in mining matters the same state of affairs exists. No event worthy of notice has occurred.

Gold to the value of £42,472 11s. 4d. has been purchased by the banks in this district during the year; and although there has been a falling-off in the quantity of gold won as compared with last year's yield, taken on the whole, the year has been fairly prosperous from a mining point of view.

Statement of Business transacted at the Warden's Court, Ophir, for the Year ending the 31st December, 1904.

Number of plaints dealt with, 4; number of appplications dealt with, 40; number of applications opposed, 11; number of miners' rights issued, 86; number of general registrations, 82; number of water-race licenses, 14; amount of fees and fines collected, £8 1s.: total revenue, £173 6s. 2d.

Statement of Revenue received at the Warden's Court, Naseby, during the Year ended the 31st December, 1904.

Miners' rights, at 5s., £39 10s.; consolidated miners' rights, £4; water-race licenses, at 2s. 6d., £1 7s. 6d.; fees and fines, £38 14s.; rents and royalties, £515 4s. 6d.; miscellaneous, £55 17s. 10d: total, £654 13s. 10d.

I have, &c.,

The Under-Secretary, Mines Department, Wellington. J. McEnnis, Warden.

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Mr Warden Cruickshanks, Lawrence, to the Under-Secretary for Mines, Wellington.

Sir,— Warden's Office, Lawrence, 13th April, 1905.

I have the honour to forward to you herewith the statistical returns for the year ended the 31st December, 1904, and to submit the following report on the several mining districts under my charge for the same period:—

Wetherstone's, Blue Spur, and Tuapeka Flat.

The Blue Spur and Gabriel's Gully Consolidated Gold Company (Limited) have been carrying on operations during the year, and the manager, Mr. J. Howard Jackson, has kindly supplied me with the following details in connection with the mine: Average number of men employed, 28; amount of cement treated, 203,135 cubic yards; amount of gold won, 1,525 oz., worth £6,062 6s. 2d.; cost of winning the gold, £2 19s. 9¼d. per ounce, or 75 per cent. of its value; amount paid in wages, £3,001 1s. 2d.; amount paid for explosives, £426 4s. 8d.; total colonial expenditure, £4,558 10s. 1d. The accidents in the mine during the year were only trivial. The difficulty in working the cement increases from various causes, but the cost of unwatering the mine has been reduced from 7 per cent. of the water-supply to about 3 per cent. by improvements in the pumping appliances. The end of the year produced a good water-supply.

The Golden Crescent Sluicing Company (Limited) at Wetherstone's have carried on operations during the year, and the manager has supplied me with the following figures: Average number of men employed, 7; amount of material treated, 187,300 cubic yards; amount of gold won, 714 oz., worth £2,760; cost of winning the gold, £1,100; amount paid in wages, £860. The ground consisted of about equal parts of old tailings treated more than once under the old system and ground that had been tunnelled out so completely that scarcely a yard of solid ground was left. Mining operations were considerably interfered with in August and September owing to the water-race being blocked with snow and ice.

At Wetherstone's the claims belonging to Messrs. Smyth, Adams, and Donlan and the Local Industry Mining Company (Limited) have been constantly at work, with fairly good results.

At Munro's Gully mining operations are still being carried on in the following sluicing claims: J. Kitto and party, P. P. Thomas and party, Edward Browne and party.

Tuapeka Flat and Terraces.

Undoubtedly this field would be greatly benefited by an adequate water-supply. I am of opinion that hundreds of acres of payably auriferous ground would be worked if a good water-supply were available. Experts are of opinion that the ground that has already been dredged would pay a fair wage if worked by hydraulic elevating, provided water was procurable at a reasonable figure.

The following dredges are working at Tuapeka Flat: the Gabriel Gold-dredging Company, J. Harris and party, the Taniwha Gold-dredging Company.

Waitahuna.

Three privately owned dredges are still working in this locality and three principal sluicing claims—viz., Messrs. Thompson and party, J. Ferris and party, and the Sailor's Gully Gold-mining Company (Limited)—have been in active operation during the year, with fair success.

Messrs. William Adams and party—known as the Lower German Flat Company—have just completed the construction of an extension of their water-race to Waitahuna Gully, a distance of about four miles. The total expenditure on construction of race and fluming, purchase of pipes, and opening up the claim will be about £1,500 or £1,600; and the intention is to work by hydraulic elevating the claim formerly held by the Waitahuna Gully Gold-dredging Company.

Table Hill.

Messrs. Thomas Park and party have been working a quartz claim at Canada Reef during the last twelve months with, I understand, very fair success. They lately acquired a stamper-battery, and are working away steadily.

Manuka Creek.

A company has been formed in Lawrence during the year, called the Manuka Mining Company (Limited) to work a claim in the locality of what is known as Comb's old claim. The method of working is ground-sluicing, and I understand the claim is giving payable returns.

Gore, Waikaka, Waimumu, and Charlton.

Nothing of importance has transpired during the year; but, speaking generally, over the whole of the above districts, I am pleased to report that the dredging industry is in a fairly satisfactory state. During the year very little land was taken up for dredging purposes, but at the same time there were but few of the existing claims surrendered. At the end of the year there were twenty-five dredges working in the Waikaka Valley. Five at Charlton, one on the Mataura River near Gore, and four at Waimumu, making a total of thirty-five and representing a capital value of about £122,500.

With reference to the dredging of agricultural land, I am pleased to report that the Messrs. McGeorge Bros. (dredge-owners) at Waikaka have constructed and are now working a contrivance on their dredges by which, in the dredging operations, the top soil after passing through an extra shoot is re-deposited on top of the dredged gravel in sufficient thickness to make the land available for agricultural purposes almost immediately, or, at any rate, as soon as it has settled down.

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MACGEORGE BROS.' NO. 1 CLAIM, WAIKAKA.— ROUGH TAILINGS, AS DEPOSITED PRIOR TO THE INTRODUCTION OF THEIR NEW METHOD.

MACGEORGE BROS.' NO. 1 CLAIM, WAIKAKA.—VIEW SHOWING JUNCTION OF TAILINGS DEPOSITED BY OLD METHOD, AND REGULAR SURFACE MADE BY THE NEW SYSTEM.

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Waikaia.

The dredging industry in this subdistrict I am pleased to report has gone on improving, and there are now ten dredges working in the locality, all on payable gold; some of them getting very handsome returns and paying the owners and shareholders large dividends.

The revenue collected by the Receiver of Gold Revenue for rents, &c., amounted to about £300 for the year.

I am informed on good authority that the local bank at Waikaia purchased 5,200 oz. of gold during the year, and it is estimated that at least 1,600 oz. have been disposed of outside the bank, making a total of 6,800 oz., valued at about £27,000, which, I think, must be considered very good indeed. Of course the hydraulic elevating and sluicing claims in the district have assisted in the above production. The following claims have been carrying on operations during the year: viz., the Argyle Hydraulic Sluicing Company, the Winding Creek Company, the Nokomai Hydraulic Company. About one hundred and sixty Europeans are now engaged in mining generally in the district.

Waipori.

Mining matters have been very quiet in this locality during the year; no new finds have been reported, but there are still nine dredges at work, which means the employment of about fifty men.

There are a good few hydraulic claims at work, all with payable returns, I understand.

Some of the machinery has been sold from the O.P.Q. claim, so that any chance of work being resumed in the mine is now, I think, very remote. I have, &c.,

The Under-Secretary, Mines Department, Wellington. G. Cruickshank, Warden.

Mr. Warden Burgess, Queenstown, to the Under-Secretary for Mines, Wellington.

Sir,— Warden's Office, Queenstown, 31st March, 1905.

I have the honour to forward herewith statistical returns relating to this portion of the Otago Mining District for the year ended the 31st December, 1904, together with a general report on mining in the several subdistricts under my charge.

Queenstown and Arrow.

Alluvial mining still constitutes the principal source from which gold is derived in this portion of the district.

On the Shotover River all the claims mentioned in my last report are still working and, on the whole, continue to yield payable returns. During the greater part of last year there was a good supply of water for sluicing purposes, and steady work has in consequence been carried on. Thompson and party, who were engaged for several years in driving a main tunnel into their claim, have now opened out the mine, and have found gold in payable quantities. Smith and party, who have for some years successfully carried on hydraulic operations on their river claim on the Upper Shotover, have worked out this ground and are now working on the terraces above. They have removed and altered their plant for this purpose. W. L. Davis and party have successfully worked their claim, which is situated about 200 ft. above the Shotover River. They have ten heads of water going through a 1-ft.-diameter pipe, with a pressure of 200 ft., and an enormous amount of stuff is put through. The tail-race is 400 ft. long, paved with railway-iron. The average yearly washing-up yields 800 oz. to 900 oz. The gold is of the highest quality. J. Davis's hydraulic claim is also a terrace claim, working successfully. The outlay for pipes, &c., to the present time exceeds £1,400. At the Sandhills, two claims are at work, yielding from £4 to £4 10s. per man per week. There are two dredges still on the Shotover River, but only one—the Maori Point dredge—has been working. Operations have, however, not been recently successful, and the owners have had many difficulties to contend against. This portion of the river is believed to be richly auriferous, and the shareholders are sanguine of ultimate success.

The copper lode at Moke Creek still attracts some attention, but nothing of any importance has been done with regard to it. At present it is held by a Dunedin syndicate, who have had granted to them a prospecting-license over 100 acres, including this lode. It is their intention to prospect the ground and test the ore, and, if results warrant it, to then undertake more extensive operations. As the property has only recently come into their hands, no practical work has yet been done.

At the Twelve-mile Creek on Lake Wakatipu, Reid and party are still working their sluicing claim with success, and Valpy and party continue to work their claim at Bucklerburn, otherwise very little mining is being carried on near the margin of the lake.

Quartz-mining has not added very greatly to the gold-returns for the year, but the outlook for the future is encouraging. The Shotover Quartz-mining company has been working all the year, and the crushings have yielded fairly well. The small cyanide plant has proved itself a very serviceable adjunct to the battery, and its use will be continued. Mr. Robert Lee has transferred his claim (the old Bullendale property at Skipper's) to the Mount Aurum Gold-mining Company. Work has been continued through the year, and about twenty men have been employed prospecting on the lode. Payable gold has been found at the east and west ends of the claim. The battery has been put in order, and crushing has lately started, but the results are not yet known. Considerably over 1,000 ft. of driving, besides crosscutting, has been done. The state of the mine is very promising. On the Arrow River the Indian Glenrock Company have been working their claim during the past twelve months, and the operations have left a margin of profit to the company. Operations are now suspended, but it is expected that arrangements will be made within a few months for recommencing work. During the latter part of the year several quartz claims have been taken up in Scanlon's Gully, near Macetown,

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close to the old Tipperary Mine. Some taken out of one of these claims yielded at the rate of 2 oz. to the ton. Work has been continued in the claim, but the results of recent crushings have not been made public. It is understood, however, that the returns are payable. The reef is from 2 ft. 6 in. to 3 ft. wide.

There is very little alluvial mining now carried on in the district. the rich auriferous terraces, ranging from 100 ft. to 600 ft. above the river have been worked out. There are three sluicing claims at work in the upper Arrow River—one working by agitation sluicing. All are doing well. Lower down the river, near its junction with the Billy Creek is the Arrow Falls Claim, mentioned in previous reports. An enormous amount of work has been done on this claim from first to last, and operations are being energetically carried on, an average of eight men being employed. The returns are payable. This claim is a difficult one to work during the winter months, operations being much impeded by frost. A little lower down the river a private company is profitably working a river-sluicing claim with a large tail-race. About a mile below Arrowtown, on the Arrow River, a claim is being worked by Peeby, Hayes, and party. They have been at great expense in procuring suitable hydraulic plant to work the river-bed. They own a water-race some miles in length, giving a pressure of 190 ft. through iron pipes. It is their intention to work the bed of the Arrow River, taking it on a face. So far operations have paid. Stephenson and party are working a sluicing claim at Bracken's, using no less than four heads of water. The claim is situated about 1,000 ft. above the Arrow River. During the last summer, as much as £60 per man was made by four men for two weeks' work. In New Chum Gully, a small party is at work sluicing, but not doing very well. At Cardrona the Lone Star Dredging Company have been steadily working in the bed of the Cardrona River for very fair returns. The La-fraudin Company have not been carrying on operations for some time, the result of past work being very unsuccessful. Adjoining the Lone Star Claim is the Sunbeam Company's claim, recently taken up by a small but energetic party. They have struck fair gold, and are hopeful of success. They own seven miles of water-races. Little and party's hydraulic sluicing claim, a little lower down the Cardrona Valley, has been worked steadily, and payable returns obtained.

Cromwell.

During the year just ended there has been no falling-off in mining in this subdistrict. Compared with last year the returns have been better, and though a number of claims have been surrendered during the period there is no doubt that several of these would have paid if sufficient capital had originally been provided to work them.

The most prominent features of mining during the past year has been the success of the upper Clutha dredges. A great advantage possessed by these dredges is their ability to work all the year round. They thus afford constant employment to the men engaged upon them. The continuous nature of their operations must be taken into consideration when comparing the gold won by these dredges with returns from dredges on the Clutha River below Cromwell and the Kawarau River, the majority of which have to close down when the river rises. In the previous year three dredges were working on the Upper Clutha: this year there have been six, all within a radius of four miles. Two of the companies working these dredges will probably soon be paying dividends, and the other dredges are all giving satisfactory returns. It is confidently expected that this part of the river will eventually prove the scene of operations of a numerous dredging fleet. The ground is most suitable for dredging, the gold existing in numerous layers through 40 ft. of gravel.

On the Kawarau River the Electric No. 1 and No. 2 dredges have been getting remarkable returns, the No. 2 having obtained in one week 1,265 oz., and some time afterwards the No. 1 got 1,273 oz., also for a week's work. The latter is a record return for the whole district. These dredges should do equally well during the coming year. The Junction Electric Company has another dredge working on their claim, and it is considered much better results will be obtained this season than during the last.

On the Clutha, below Cromwell Bridge, four dredges have been getting steady returns, but have latterly closed down owing to the river rising.

At the Luggate, mining is quiet, there being little change from last year. There is one dredge working on the river (owned by a private company), and getting payable returns. There are a few alluvial miners at work, but the return of gold is small. I understand a large sluicing claim will be shortly taken up here.

At Nevis mining continues to be prosperously carried on. The dredges have been kept steadily at work. The cheapness of coal enables steam-driven dredges to be worked here with less expense than elsewhere. There are several sluicing claims at work, all doing well.

Quartz-mining has been very inactive. The hopes held out a year or two ago of a renewed interest in this class of mining have, unfortunately, not been realised. At that time several quartz claims had been taken up in different parts of the district, and it was anticipated that the prospecting carried on would result in the discovery of payable quartz reefs, as there is every reason to believe in their existence in this district. One by one, however, these claims were, after more or less work had been expended on them, given up as unprofitable, and now quartz-mining is carried on in a desultory manner by one or two parties only. There are two claims at work in the Carrick Ranges, but their operations have not been very successful. The owners of one of these claims are now putting up a more powerful battery, being of opinion that there is sufficient gold to pay if the ore were subjected to more efficient treatment. At Bendigo a party of tributers were for a time engaged in working the old Bendigo Mine, but discontinued through want of success. During the past few years several attempts have been made by different parties to reopen this once famous mine, but in each case operations were discontinued because it was found that the capital at command was insufficient to open out the mine on a comprehensive plan so as to enable the lower levels of the mine to be worked. The property has lately changed hands,

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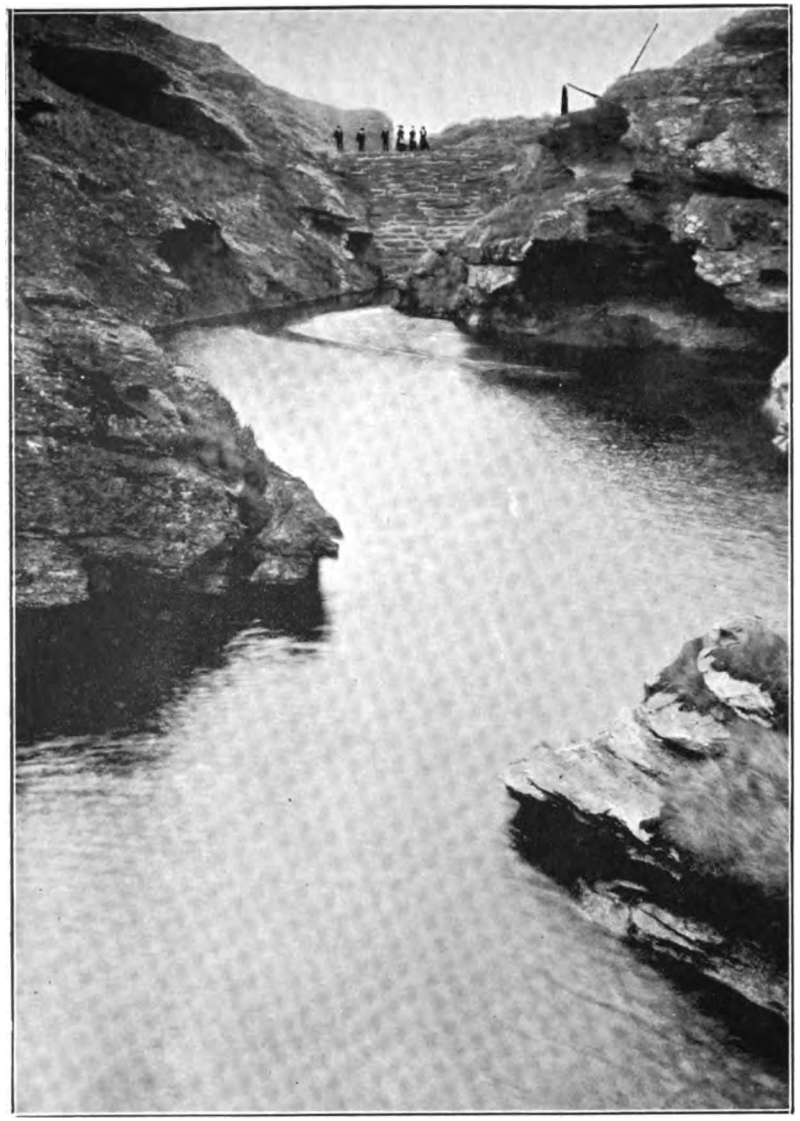
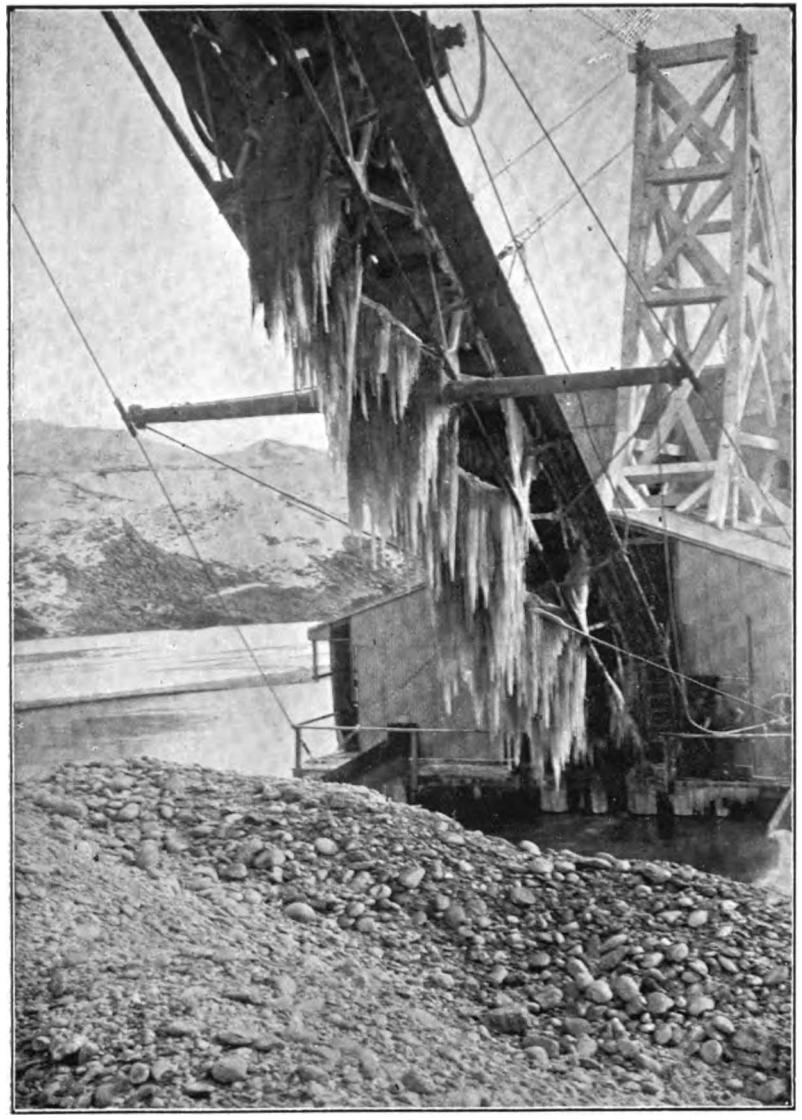


MR. RIVERS' DAM AT SPEARGRASS CREEK, NEAR ALEXANDRA, OTAGO.
INNER FACE OF WALL AND ACCUMULATING WATER SHOWN.

[*See also Report of Inspecting Engineer.*



DUNSTAN LEAD DREDGE. ICICLES HANGING FROM ELEVATOR.

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and the new proprietary are endeavouring to raise sufficient capital to put in a low-level tunnel by means of which the deeper portions of the mine (still intact) can be economically worked. The estimated cost of such a tunnel would be about £10,000. It is sincerely to be desired, in the interests of the whole district, that their efforts will prove successful.

Clyde and Alexandra.

The number of men employed in sluicing and fossicking in this portion of the district is diminishing year by year. In the outlying gullies, where a few years ago it was not unusual to find a few men in each doing fairly well, only an odd Chinaman may now be seen. Two or three parties, with their own water, are still carrying on operations on the west bank of the Clutha River, but not, I am afraid, with very profitable results. The bulk of the excellent water-supply from the Fraser River is being devoted to stripping off the overburden for the benefit of the working dredges and for keeping the river-bank dredges afloat.

The water-rights of the Alexandra Bonanza Company are not at present being utilised, and that part of the Galloway Terraces which a few years ago attracted considerable attention has, from want of an adequate supply of water, become practically deserted, and the licenses for the many small claims which were then taken up have been cancelled. Since the cancellation of these titles a syndicate of Dunedin gentlemen has taken up five special claims over and adjoining the same ground, and men are now engaged in systematically prospecting with a view to discovering whether gold exists in sufficient quantities to warrant the expenditure necessary to bring water on to the field.

During the year Mr. James Rivers extended his water-race from Tucker's Flat to a terrace near the Manorburn Creek. A considerable amount of sluicing was done, but as the season was, locally, an exceptionally poor one for water, the result of his operations was somewhat disappointing. He seems satisfied, however, that under more favourable circumstances the ground will prove payable, and intends to give it a further trial.

Dredging.—The dredges above Alexandra, which, from their favourable position, have put in average working-time, may be said to have done remarkably well. The season for gorge dredging, however, was most unfavourable, and this has militated very much against the returns from these dredges, and also the aggregate yield of the district. The Manuherikia dredge, at the entrance to the gorge, had the longest run, putting in twenty-five weeks, during which time 1,714 oz. of gold was won, or an average of 68 oz. per week; while the Sailor's Bend dredge only worked five weeks, for 139 oz.; the New First Chance dredge, nine weeks for 474 oz.; the New Golden River dredge, two weeks for 76 oz.; and the New Bendigo dredge, six weeks for 129 oz. These returns, however, clearly indicate that the gold is in the river in highly remunerative quantities if the conditions are only favourable for winning it. These remarks also apply to the Fourteen-mile Beach dredge a few miles lower down the gorge. This dredge worked only thirteen weeks, during which time 1,763 oz. of gold was obtained, or an average weekly return of 135 oz. There are miles of dredgeable river between this and Coal Creek as yet practically untried, and there is every likelihood that this stretch of the river will in the future again attract the attention of investors who, profiting by past unfortunate experience, will be prepared to equip their claims with modern and adequate machinery.

At and near Sandy Point the results for the past year may be set down as extremely satisfactory, and although many of the claims have been worked for several years with profit, they exhibit no sign of being exhausted. The Earnscleugh No. 3 dredge, working some distance from the river-bank, has succeeded in reaching the level of the river, and for some time has been yielding very satisfactory returns. Indeed, so well have the results satisfied the shareholders that the company have pegged out and applied for fresh ground, intending to procure for employment thereon another equally capable dredge. For this purpose they have purchased the pontoons which were constructed for the Fraser Flat Company close by.

At and near Clyde the Unity and Matau dredges are the only machines at work at present. The Monte Christo and the Davis Bend No. 2 dredges have for some time ceased operations, and are in the hands of caretakers. The Monte Christo will, however, commence operations again when the river reaches its most favourable condition for dredging. The company has only a limited capital at its command, and desires to employ it in carrying out its operations only under the most favourable circumstances. The Davis Bend dredge has been idle for over a year, and it is the general impression that it will not start again under the present ownership. This is somewhat surprising and also disappointing to local people, because, when working previously, the claim proved highly payable even up to the time when operations were suspended.

There are three dredges working on the Manuherikia River. The Olrig and the Manuherikia Syndicate are advantageously working, whilst the third, owned by a private party, is approaching the party's claim by means of dredging through adjoining ground.

Bald Hill Flat: There are no workings of note to report in this locality. The Last Chance Sluicing Company had a fairly successful year, and Carroll and party did well, working Mitchell's claim on tribute.

Quartz.—The Excelsior and White's Reefs are still being worked, but, from want of capital, Mr. Symes, the proprietor of the latter, is unable to properly develop the mine as he would like, but seems quite satisfied that there is a good run of payable stone close by, and has no present intention of relaxing his efforts to obtain it.

Roxburgh.

The Ladysmith and Roxburgh Amalgamated companies have been working steadily at Roxburgh East. The former is doing exceedingly well, while the latter, though not so prosperous, is turning over a large area of ground at no loss to the company.

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Haughton and party at Commissioner's Flat, and Manuel Brothers at Coal Creek, have the only other sluicing claims of any magnitude in this locality, and although hampered considerably by want of fall, both may be regarded as fairly payable undertakings.

Dredging.—This industry has improved very much during the past year. The Golden River dredge heads the list with 2,321 oz., while the Roxburgh Jubilee, Golden Bed, Lady Roxburgh, Otago No. 2, Ettrick, and Golden Gate dredges have all succeeded in paying substantial dividends. The Golden Treasure dredge has also met with its usual success, but it is understood that the surplus has been devoted to the purchase of a second dredge instead of being paid away in dividends.

The statement following shows the working-results of fifty dredges, the aggregate gold won (59,613 oz.) and dividends paid (£85,226). These figures compare very favourably with those of the previous year, when sixty dredges produced 54,162 oz. 10 dwt., the dividends declared being £81,177 3s.; but show a marked improvement on those of 1901, when the same number of dredges is credited with 44,913 oz., and dividends £45,358.

RETURN of FIFTY DREDGES showing Gold won, Number of Working Weeks, Average for each Working Week, and the Dividends paid, for the Year ended the 31st December, 1904.

Name of Company.	Number of Weeks working.	Amount of Gold won.	Average per Working Week.	Capital.	Dividends Paid.
		Oz. dwt. gr.	Oz.	£	£ s. d.
Matau	33	701 15 0	21	7,000	...
Unity	21	555 18 0	28	10,500	525 0 0
Dunstan Lead	39	1,426 17 0	36	17,500	1,748 14 0
Perseverance No. 1	32	1,623 8 16	50	14,000	1,873 15 0
Perseverance No. 2	35	901 14 18	25		
Sandy Point	33	1,501 18 8	45	8,000	1,600 0 0
Earnscleugh No. 1	36	974 19 21	27	11,000	4,950 0 0
Earnscleugh No. 2	28	1,069 2 21	38		
Enterprise No. 1	47	1,054 9 5	22	7,000	2,975 0 0
Enterprise No. 2	40	1,023 16 16	25		
New Golden Beach	35	509 12 0	14	5,000	...
Molyneux Hydraulic	30	421 0 0	14	5,896	...
Alexandra Lead	21	472 14 0	22	17,521	...
Clyde	28	977 10 0	35	4,000	1,050 0 0
Manuherikia	25	1,714 1 0	68	12,000	5,400 0 0
Chicago	42	668 13 6	16	5,000	..
Olrig	46	1,059 2 22	23	6,055	695 10 0
Sailor's Bend	5	139 0 0	28	8,000	...
New First Chance	9	472 12 0	52	7,000	...
New Bendigo	6	129 10 0	21	6,600	...
New Golden River	2	76 0 0	38	3,000	...
New Fourteen-mile Beach... ...	13	1,763 16 0	135	4,800	2,760 0 0
Lady Roxburgh	42	1,754 10 7	41	6,660	1,663 0 0
Molyneux Kohinoor	25	469 19 13	18	9,575	...
New Roxburgh Jubilee	38	2,254 0 4	59	7,500	6,750 0 0
Ettrick	39	1,098 6 0	28	10,250	1,015 0 0
Majestic	20	566 13 0	28	6,500	...
Otago No. 1	42	763 7 0	18	5,000	875 0 0
Otago No. 2	40	1,648 10 0	41		
Golden Gate	46	797 1 0	17	2,500	500 0 0
Golden Bed	41	1,809 8 0	44	12,706	1,270 6 0
Golden Treasure	32	1,005 4 0	44	2,876	...
Golden Run	33	2,321 16 0	70	11,000	3,850 0 0
New Halfway House	15	441 13 8	29	8,000	...
Riley's Beach	9	428 19 0	47	9,650	...
New Alpine Consols	14	535 1 20	38	6,195	...
Alpine No. 2	19	565 11 22	29	6,000	...
Hartley and Riley	21	933 1 13	44	6,500	1,625 0 0
Electric No. 1	35	6,102 3 0	174	26,000	39,650 0 0
Electric No. 2	38	7,282 13 0	191		
Junction Electric No. 1	32	1,410 12 0	41	26,000	1,300 0 0
Junction Electric No. 2	27	596 17 0	22		
Cromwell No. 1	29	1,381 5 6	47	7,000	3,150 0 0
Cromwell No. 2	30	664 3 0	22		
Rise and Shine No. 1	44	1,861 16 0	42	12,000	...
Rise and Shine No. 2	40	496 5 0	20		
Rising Sun	42	1,650 1 0	39	8,000	...
Revival	28	717 19 0	25	?	...
Loch Lomond	18	318 17 0	17	?	...
Ngapara No. 3	18	152 19 10	8	7,000	...
Total	...	60,261 4 20	...	356,784	85,226 5 0

NOTE.—The above figures do not indicate the total output of gold by means of dredging, for, in addition to the dredges named, there are at least eleven owned by private parties whose returns are not made public. These dredges are known to be average gold-producers, and consist of The Earnscleugh No. 3, Ngapara No. 1, Ngapara No. 2, Manorburn Syndicate, Teviot, Endeavour, Gold King, Grogan and party, Pringle and party (two), and the Meg and Annie Syndicate.

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COMPARATIVE STATEMENT in respect of FIFTY DREDGES, showing the Aggregate Working Weeks, Quantity of Gold won, Capital invested, and Amount of Dividends declared during the Years 1901, 1902, 1903, and 1904.

Year.	Aggregate Working Weeks.	Gold obtained.	Capital invested.	Amount of Dividends declared.
		Oz. dwt. gr.	£	£ s. d.
1901	1,182	44,913 18 3	472,076	45,358 14 0
1902	1,596	71,315 0 15	348,801	107,506 6 0
1903	1,454	54,162 10 1	395,429	81,177 3 0
1904	1,464	59,613 5 6	356,784	85,226 5 0

There is a slight falling-off in the revenue returns for the past year, caused chiefly by surrenders, amalgamations, and repegging; but it is not expected that the current year will suffer in this respect to the same extent.

I have, &c.,
FRED. J. BURGESS, Warden.

The Under-Secretary Mines Department, Wellington.

Mr. Warden RIDDELL, Invercargill, to the UNDER-SECRETARY FOR MINES, Wellington.

SIR,— Magistrate's Office, Invercargill, 20th April, 1905.

WESTERN DISTRICT.

Round Hill Goldfield.—There is little to report on this field for the year ending the 31st December, 1904, beyond the work carried on by the Round Hill Mining Company (Limited), the Ourawera Gold-mining Company (Limited), and the Smith Gold-mining Company (Limited). Three Europeans have been working the ground about half a mile above the township by means of ground-sluicing; and towards Colac, near the head of Jewell's Gully, another party of Europeans are elevating. The latter have a reservoir for storing water, but as the supply is limited their work is irregular. Both parties do little more than pay wages. From ten to thirteen Chinese are also working intermittently on the field. With regard to the companies above mentioned, the Round Hill Mining Company (Limited) commenced operations in 1891. They have a paid-up capital of £28,245, and during the year paid a dividend of £3 per cent. on the capital. This company possesses the best water-supply on the field. It comes from the Longwood Ranges, and during the year work in the shape of sluicing and elevating has been carried on, chiefly on the east side of the stream below the township. When water was plentiful the ground on the west side of the stream was worked, and it is estimated that it will take several years to sluice and elevate the rest of the ground held by the company. The Ourawera Gold-mining Company (Limited) is a much smaller company, having a capital of £3,000. It commenced operations in 1895, and since then dividends amounting to £1 8s. per share have been paid to the shareholders. Its water-supply is very fair, and the usual operations of sluicing and elevating have been carried on throughout the year in extending the area beyond the ground worked in 1903. Some work has also been done at the junction of the Italian Gully with the main stream running through the field; but, on the whole, the returns have not been so profitable as for the year ending 1903. The Smith Gold-mining Company (Limited) was registered in or about the year 1898. It has a capital of £2,000. Its water-supply is much smaller than that of either of the companies already mentioned, and during the year ground-sluicing was carried on with comparatively little success. This company has not yet paid a dividend to its shareholders. The whole of these companies have a number of years' work before them, but whether of a profitable nature or not it is impossible for me to say.

Orepuki Goldfield.—On this field very little fresh ground was opened up during the year, but there are indications to show that within a short time a considerable area of ground south of Orepuki proper will be worked, and from it good returns are expected. The great drawback to further prospecting is the difficulty and expense of extending water-races to new ground, and so long as fairly good and easily worked claims are left in Orepuki proper no new ground will be taken up. In some cases during the year several parties have had excellent returns (reaching as high as 50 oz. per month), and with similarly good ground in view. In all there are about twenty sluicing claims on the field, all working with varied success, the poorest returning fair wages, while equal results are expected for some considerable time.

West Waiau Goldfield.—Some of the claims on this field have done exceptionally well. Recent storms have washed up large quantities of gold-bearing sands, thus giving the sea-beach claims a fresh life. In some cases as much as £10 per week per man has been obtained, while the alluvial claims on the terrace are still paying their way.

Stewart Island Goldfield.—Widdowson's claim in the Anglem district has been discontinued, owing to the results from the workings not being up to expectations. In the Pegasus district operations of a prospecting nature are still being carried on by the Stewart Island Tin-mines Proprietary Syndicate, but as yet they have not discovered anything of a payable character.

Preservation Inlet Goldfield.—Work on this field has been stationary during the year. Some prospecting has been done in various places, but without much success. An effort is being made by an Invercargill syndicate to work the Morning Star Mine, but as yet no definite arrangements have been made.

EASTERN DISTRICT.

Waikawa Goldfield.—On this field only two men have been working during the past year, in conjunction with farming operations. So far as mining is concerned the field seems pretty well worked out.

I have, &c.,
W. G. RIDDELL, Warden.

The Under-Secretary, Mines Department, Wellington.

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GOVERNMENT WATER-RACES.

Mr. Alexander Aitken, Manager, Waimea-Kumara Water-races, to the Under-Secretary for Mines, Wellington.

Sir,— Kumara, 20th April, 1905.

I have the honour to forward the following report on the working of the Waimea-Kumara Water-races for the financial year ended the 31st March, 1905.

Waimea Race.

The total sales of water from this race for the year ended the 31st March, 1905, amounted to £613 10s. 3d., and the expenditure for the same period on gauging, maintenance, and repairs was £680 8s., showing a debit balance of £66 17s. 9d. on the transactions for the year.

The average number of miners supplied with water from the race for sluicing purposes during the year was 20·25, and the approximate quantity of gold obtained by them was 1,830 oz., having a value of £7,137.

The sales of water were less by £110 9s. 2d. than during the preceding year, and the quantity of gold obtained was approximately 159 oz. less, representing a decrease in value of £620 2s.

The number of miners employed in sluicing with water from the race was 5·16 less than during the preceding year.

The expenditure on gauging, maintenance, and repairs compared with the preceding year was £37 19s. 6d. less, although a considerable amount had to be expended in the neighbourhood of the head-works at Kawhaka, and on the various flumes on the lower portion of the race.

The headworks at Kawhaka, the Waimea Syphon, the fluming, and all the races and branch races have been maintained and repaired, and are now in good workable condition, considering the length of time since they were originally constructed.

At the Stafford end of the race very little work has been done during the year, and the ground has been very poor. The supply of water was interrupted for a portion of the time by a land-slip, which carried away a length of high fluming, and the supply is now being conveyed across the gap by pipes. Had fluming been again constructed, it would not have been safe until the ground liable to slip had fairly settled.

The only parties using water from the Stafford portion of the race are Chinamen, and as the prospects during the latter portion of the year have improved considerably, and as a new claim is being put in working-order by them, there is a fair prospect of the sales of water from the race being much better than for some years past.

The Chinamen in the Stafford district, although making a bare living, have been very persevering in their endeavour to open up payable ground, and the prospects recently obtained are certainly encouraging, and, as there is a very large extent of ground still unworked and very little prospected, a better and more prosperous year may reasonably be expected.

At Tunnel Terrace, in the Goldsborough portion of the district, there are still a number of parties at work, but sluicing has been intermittent during the year, and the results have not been of a very satisfactory description. The ground is poor, and in order to make it pay large quantities of wash have to be sluiced away, and this can only be done by using a plentiful supply of water. There is still an enormous quantity of poor wash in this locality; and the reduction in the price of water, which takes effect from and after the 1st May, will do much to put fresh life into mining generally in the Waimea district.

At the claim owned by Perry and party not much work has been done during the year in the way of sluicing, the party having been engaged in the construction of dams and races, for which they hold rights under the Mining Act. They have also been constructing a new tail-race, which will give a much better tailing-site than they had before, and they will, in all probability, use more water from the Government races in the future than they have in the past.

The Waimea Hydraulic Sluicing Company has again let the claim and plant on tribute, and the tributers have done fairly well during the year. Work has not been continuous in the claim, but a very fair quantity of water has been used, with payable results. The use of water in this claim will be continued so long as the ground is payable, and as the unworked ground is extensive it may be payable for many years.

The claim worked by Burroughs and party at Fox's has now been abandoned, as the expense of working and the difficulties encountered were too much for a party of small means. There is, however, good gold-bearing ground in the claim, and it will in all probability be taken up and tried again.

When stoppages occurred from slips or other causes repairs were promptly effected and the water turned on again, but no stoppages of any long duration occurred during the year.

The supply of water was excellent throughout the year, and no stoppages were caused from an insufficient supply of water.

The following tabulated statement shows the sales of water and the cost of maintenance of the Waimea Race for the year ended the 31st March, 1905, and also the approximate quantity and value of gold obtained by parties using water from the race.

Month.	Sales of Water.	Cash received for Sales of Water.	Expenditure.	Outstanding Moneys at the End of Each Month.	Number of Men employed.	Approximate Quantity of Gold obtained.	Value of Gold obtained.
1904.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		Oz.	£ s. d.
April	86 7 1	49 10 10	60 19 2	57 16 0	18	108	421 4 0
May	50 3 9	22 18 9	70 11 8	77 19 3	19	150	585 0 0
June	50 1 8	49 1 8	64 2 5	78 19 3	17	150	585 0 0
July	35 0 10	56 0 0	60 16 8	58 0 1	24	105	409 10 0
August	49 1 8	44 11 6	54 11 8	63 9 3	24	147	573 6 0
September	53 13 4	54 15 3	47 4 2	72 6 4	20	159	620 2 0
October	60 18 0	54 3 3	45 1 8	71 18 5	21	183	713 14 0
November	63 16 6	39 4 2	53 14 2	92 15 5	21	189	737 2 0
December	49 3 9	60 14 8	47 6 8	87 6 8	23	147	573 6 0
1905.							
January	27 10 0	5 5 10	61 16 8	105 10 4	14	81	315 18 0
February	57 3 1	14 10 0	61 18 11	146 1 9	20	171	666 18 0
March	80 10 7	70 4 6	52 9 2	156 12 10	22	240	936 0 0
Totals	613 10 3	521 0 5	680 8 0	..	20·25 (average)	1,830	7,137 0 0

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Branch Race to Callaghan's and Middle Branch of Waimea Creek.

The total sales of water from this branch race for the year ended the 31st March, 1905, amounted to £685 4s. 7d., and the expenditure for the same period on gauging, maintenance, and repairs was £526 16s. 2d., showing a credit balance of £158 8s. 5d. on the transactions for the year.

The average number of miners supplied with water for sluicing purposes from this branch race during the year was 16·58 (showing a decrease of 1·92 as compared with the previous year), and the approximate quantity of gold obtained by them was 1,708 oz., having a value of £6,661 4s.

The sales of water for the past year were £232 16s. 8d. less than during the preceding year, and the approximate quantity of gold obtained was less by 472 oz., representing a value of £1,875 18s.

The expenditure on gauging, maintenance, and repairs during the year was £149 0s. 8d. less that during the preceding year, and the work of enlarging the dam has been completed.

The storage-capacity of the dam is now sufficient for the claims at present at work, and the whole of the night-water is now stored for use in the daytime, when the claims are working.

At the beginning of the year there were seven claims using water from this race, but two of them have since ceased working, as it was found that they would not pay expenses, and the probability is that another claim will also be closed down. There are, however, three other claims not yet connected with the Waimea Tail-race, and one of them is now preparing to start sluicing at once. From the position of the three claims referred to the probability is that all of them will prove payable. Besides the above, there is a considerable area of ground not yet taken up likely to prove payable sluicing-ground.

The Waimea Main Tail-race has been extended a further distance of 400 ft. during the year, which should enable other claims to connect and start sluicing at once.

Taking into consideration the low gradient of the Waimea Main Tail-race, it continues to work well as long as it is kept in good order. For some months it did not work well, because the contractors allowed the wooden blocking to get into a bad state; but recently it has been to a very large extent re-blocked, and is now in good condition and working in a satisfactory manner.

In Callaghan's Flat very little work has been done during the year, and very little water has been used there. A new claim has been recently started, and is now being supplied with water. An application has also been made for a regular supply of water for another claim.

Sluicing on a large scale has never been attempted in Callaghan's, and if the claims now trying the experiment are successful a large extent of the flat will be worked.

The following tabulated statement shows the sales of water and the cost of maintenance of the Callaghan's and Middle Branch Race for the year ended the 31st March, 1905, together with the approximate quantity of gold obtained by parties using water from this race.

Month.	Sale of Water.	Cash received for Sales of Water.	Expenditure.	Outstanding Moneys at the end of each Month.	Number of Men employed.	Approximate quantity of Gold obtained.	Value of Gold obtained.
1904.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		Oz.	£ s. d.
April	52 10 0	14 0 0	48 16 3	232 7 0	15	130	507 0 0
May	63 11 8	45 0 0	64 18 9	250 18 8	15	157	612 6 0
June	73 5 0	53 0 0	43 10 0	270 18 8	19	182	709 16 0
July	49 15 10	47 6 8	36 10 0	273 7 10	19	125	487 10 0
August	77 0 0	65 0 0	44 4 0	292 17 10	18	192	748 16 0
September	47 17 6	80 17 3	43 4 6	254 8 1	19	120	468 0 0
October	43 10 10	23 16 8	40 15 0	273 4 10	19	110	429 0 0
November	60 3 4	45 0 0	49 3 9	291 15 7	19	150	585 0 0
December	39 18 4	63 15 9	40 15 3	268 15 8	14	100	390 0 0
1905.							
January	32 12 6	21 0 0	48 1 8	275 0 8	14	82	319 16 0
February	93 10 0	21 0 0	38 17 6	347 10 8	14	232	904 16 0
March	51 9 7	39 5 0	27 19 6	359 15 3	14	128	499 4 0
Totals	685 4 7	519 1 4	526 16 2	..	16·58 (average)	1,708	6,661 4 0

KUMARA RACE.

The total sales of water from this race for the year ended the 31st March, 1905, amounted to £812 9s. 1d., and the expenditure on gauging, maintenance and repairs for the same period was £1,284 2s. 4d., showing a debit balance of £471 13s. 3d. on the transactions for the year.

The average number of miners supplied with water for sluicing from the race was 19·75, showing a decrease of 13·33 as compared with the previous year, and the approximate quantity of gold obtained by them was 1,628 oz., having a value of £6,349 4s.

The sales of water were £369 1s. less than during the preceding year, and the quantity of gold obtained was less by 1,306 oz., representing a decrease in value of £5,093 8s.

The expenditure on gauging, maintenance, and repairs during the year was less by £328 10s. 6d. than during the previous year, and all the dams, races, branch races, tunnels, and siphons have been kept and are now in a thorough state of repair and in good working-order.

There has been no sluicing into No. 3 channel during the year, but none of the claims leading into it have been abandoned. There is still a large extent of unworked ground for which No. 3 channel will be available, but it is poor, and a considerable amount of work will have to be done in constructing new tail-races on a lower gradient before it can be properly worked. The reduction in the price of water should be the means of encouraging the parties holding the ground to make a fresh start, and the probability is that several of them will again resume sluicing.

The No. 3 channel deviation has now been driven and timbered a distance of 1,511 ft., of which distance 1,102 ft. has been boxed and blocked. At 1,102 ft. a shaft 82 ft. in depth has been sunk, timbered, and centred, and a good ladder-way has been constructed. A chamber has also been excavated

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and timbered which connects the shaft with the channel, giving a better means of communication with the new portion of the channel for workmen and material, and at the same time making the ventilation thoroughly efficient.

The two original parties are still working into No. 4 channel, and are sending away large quantities of wash every shift. So far as can be ascertained, the results of the past year's work have been fairly satisfactory, although the ground worked has been poor, and the expense of maintaining the great lengths of channel and tail-races great. During the year the channel alone cost more than £700 for maintenance, and both parties have besides the channel very long and expensive tail-races to maintain. The unworked ground still held by the two parties is very extensive, and will not be worked out for many years. The reduction in the price of water will materially benefit the parties working into the No. 4 channel, and will enable them to work ground that would not otherwise pay.

During the past year the claims working into No. 5 channel have not by any means been at work continuously, and the results of the work that has been done have not been of a very satisfactory character, but the reduction in the price of water will enable most of them to continue to work their ground and earn small wages with the prospect of the ground yielding more payable results than it has done in the past.

Two of the parties working through private races are apparently satisfied, and continue to energetically work their claims, sluicing away a great quantity of material, but one is now entirely worked out.

The supply of water has been ample for all requirements throughout the year, and no time has been lost from shortage of water.

The following table shows the number of days in each month on which water was running over the dams and the total quantity lost during the year, and also the number and dates of holidays on which no water was used for sluicing.

Month.	Water running over Dam.	Quantity of Water lost.	Holidays.	No Water for Channel.	Dams empty.
1904.	Days.	Days.	Days.	Days.	Days.
April	5	11	6	..	..
May	6	23	..	..	..
June	16	43½	..	..	..
July	3	1	..	..	..
August	10	23½	..	..	..
September	7	15½	1	..	..
October	12	12	..	..	..
November	19	61½	7	..	..
December	8	15	..	..	..
1905.					
January	8	9½	7	..	..
February	..	..	..	..	..
March	4	2	..	..	..
Totals	98	217½	21	..	..

The usual quantity of water authorised by the Department has been supplied to each of the main tail-races for flushing purposes—viz., No. 4 channel, ten sluice-heads; No. 5 channel, twenty sluice-heads; and in no instance was less than those quantities supplied.

Water was also supplied for fire purposes to the Borough of Kumara, and for washing-up purposes to the claims using water from the race.

The following tabulated statement shows the sales of water and cost of maintenance of the Kumara Race for the year ended the 31st March, 1905, and the approximate quantity and value of gold obtained by parties using water from the race.

Month.	Sales of Water.	Cash received for Sales of Water.	Expenditure.	Outstanding Moneys at the End of each Month.	Number of Men employed.	Approximate Quantity of Gold obtained.	Value of Gold obtained.
1904.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		oz.	£ s. d.
April	63 10 0	22 0 0	154 2 5	1,457 15 3	28	128	499 4 0
May	75 5 0	100 0 0	133 13 3	1,433 0 3	25	152	592 16 0
June	62 19 2	..	98 4 6	1,495 19 5	19	126	491 8 0
July	78 2 6	120 0 0	140 7 4	1,454 1 11	23	156	608 8 0
August	81 4 2	51 0 0	103 1 9	1,484 6 1	24	162	631 16 0
September	60 10 10	62 10 0	78 10 4	1,482 6 11	25	120	468 0 0
October	76 14 7	102 0 0	87 1 4	1,457 1 6	17	154	600 12 0
November	59 10 10	78 0 0	80 1 9	1,508 12 4	17	120	468 0 0
December	82 19 4	82 0 0	106 9 8	1,509 11 8	22	166	647 8 0
1905.							
January	41 17 6	110 0 0	122 16 6	1,541 9 2	10	84	327 12 0
February	92 14 9	..	89 10 2	1,634 3 11	16	186	725 8 0
March	37 0 5	96 0 0	90 3 4	1,575 4 4	11	74	288 12 0
Totals	812 9 1	653 10 0	1,284 2 4	..	19·75 (average)	1,628	6,349 4 0

The following table shows the result of working the Kumara Race for the twenty-two years from the 1st April, 1883, to the 31st March, 1905.

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ril, 1883, to 31st March, 1905.

	Total Value of Water sold.	Total Value Free for Assistance.	Total Value Free for Deviations.	Total for Construction of No. 3 Channel.	Total Value Water supplied.	Average Number of Sluice-heads supplied Daily.	Expenditure.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.
	8,346 14 11	..	..	..	..	..	..
	..	1,386 2 1	..	..	..	..	..
	..	..	..	..	9,732 17 0	46·35	2,153 5 5
	9,704 8 2	..	..	..	..	..	..
	..	780 14 2	..	..	..	..	..
	..	..	..	..	10,485 2 4	49·92	1,656 0 1
	9,788 16 8	..	..	..	..	..	..
	..	221 3 2	..	..	..	..	..
	..	..	..	..	10,009 19 10	57·20	1,454 19 5
	..	..	..	..	..	..	..
	6,470 14 4	..	..	..	..	..	..
	..	1,547 18 11	..	..	..	..	..
	..	..	..	..	8,018 13 3	56·19	1,398 18 10
	7,169 10 3	..	..	..	..	..	..
	..	347 6 5	..	..	..	..	..
	..	..	..	..	7,516 16 8	53·68	982 12 0
	6,716 6 10	..	..	..	..	..	..
	..	492 0 0	227 0 0	..	..	..	..
	..	..	..	..	7,435 6 10	53·10	1,024 1 9
	8,550 4 8	..	..	..	..	..	..
	..	396 2 6	465 0 0	..	..	..	..
	..	..	..	1,492 2 10	..	..	..
	..	..	..	..	5,903 10 0	42·16	1,424 13 3
	6,665 12 8	..	..	..	..	..	..
	..	409 5 5	793 0 5	..	..	..	..
	..	..	..	913 18 4	..	..	..
	..	..	..	..	8,781 16 10	62·72	1,766 4 3

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Waimea-Kumara Water-races.

The following tabulated statement shows the revenue, cost of maintenance, approximate quantity of gold obtained, and the number of men employed in sluicing in the claims using water from the Government water-races in the Waimea-Kumara district for the year ended the 31st March, 1905 :—

Month.	Sales of Water.	Cash received for Sales of Water.	Expenditure.	Outstanding Moneys at the End of each Month.	Number of Men employed.	Approximate quantity of Gold obtained.	Value of Gold obtained.
1904.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		oz.	£ s. d.
April	152 7 1	85 10 10	263 17 10	1,747 18 3	61	366	1,427 8 0
May	189 0 5	167 18 9	269 3 8	1,761 18 2	59	459	1,790 2 0
June	186 5 10	102 1 8	205 16 11	1,845 17 4	55	458	1,786 4 0
July	162 19 2	223 6 8	237 14 0	1,785 9 10	66	386	1,505 8 0
August	207 5 10	160 11 6	201 17 5	1,840 13 2	66	501	1,953 18 0
September	162 1 8	198 2 6	168 19 0	1,810 1 4	64	399	1,556 2 0
October	181 3 5	179 19 11	172 18 0	1,802 4 9	57	447	1,743 6 0
November	183 10 8	92 4 2	182 19 8	1,893 3 4	57	459	1,790 2 0
December	172 1 5	206 10 5	194 11 7	1,865 14 0	59	413	1,610 14 0
1905.							
January	102 0 0	36 5 10	232 14 10	1,922 0 2	38	247	963 6 0
February	243 7 10	35 10 0	190 1 7	2,127 16 4	50	589	2,297 2 0
March	169 0 7	205 9 6	170 12 0	2,091 12 5	47	442	1,723 16 0
Totals	2,111 3 11	1,693 11 9	2,491 6 6	..	56·58 (average)	5,166	20,147 8 0

The following schedule shows the claims that have been sluicing on the Kumara Goldfield during the year ended the 31st March, 1905, showing the number of men in each claim, fall and width of boxes in each tail-race, number of sluice-heads of water used in sluicing, number of cubic yards of wash sluiced away per hour, and the name of race from which the water was supplied :—

Name of Party.	Number of Men employed in each Claim.	Fall to 12 feet in Tail-race.	Width of Boxes in Tail-race.	Number of Sluice-heads used in Sluicing	Auriferous Wash sluiced away per Hour.	Race from which the Water is supplied.	Remarks.
		Inches.	Inches.	Heads.	Cubic Yards.		
No. 4 channel—							
Cullen and party ..	6	7	24	20	140	Kumara	Sluiced twelve months.
Long Tunnel Co. ..	8	7	26	22	154	Kumara & private	Sluiced twelve months.
No. 5 channel—							
Burger and party ..	5	8	24	10	80	Kumara	Sluiced eight months.
Thomson and party	4	8	24	10	80	,,	Sluiced two months.
Thorn and party ..	4	8	24	10	80	,,	Sluiced nine months.
Morgan and party ..	3	8	24	10	80	,,	Sluiced eight months.
Giffney and party ..	5	7	26	11	77	,,	Sluiced eleven months.
Private races—							
Pascoe and party ..	5	7	26	16	112	,,	Sluiced seven months.
Stubbs and party ..	3	8	32	22	176	Private	Sluiced twelve months.
McGrath and party	10	8	24	22	176	,,	Sluiced twelve months.

Kumara Deep-level Tunnel.

No work of any kind has been done in the Kumara Deep-level tunnel during the year, but it will be necessary to effect some repairs at an early date if the tunnel is to be kept open for future prospecting-work. The private parties are still continuing to work from the front of the terrace facing the Teremakau River, and I am assured the results have recently very much improved and payable ground is likely to be opened up.

Wainihinihi Race.

The supply of water from this race has been good throughout the year, and has done much to keep up the supply for Waimea, Stafford, Callaghan's, and the middle branch of the Waimea Creek. Very little of the Wainihinihi water has been used in the Kumara district. No breaks occurred, and there were no stoppages of any kind during the year, and the race has been maintained in good order and condition.

I have, &c.,

Alex. Aitken,

The Under-Secretary, Mines Department, Wellington. Manager, Water-races.

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Mr. R. MURRAY, Manager, Mount Ida and Blackstone Hill Water-races, to the UNDER-SECRETARY FOR MINES, Wellington.

SIR,— Naseby, 20th April, 1905.

I have the honour to submit the following report on the Mount Ida and Blackstone Hill Water-races for the year ending the 31st March, 1905 :—

MOUNT IDA WATER-RACE.

The total sales of water from the Mount Ida water-race during the year amounted to £1,459 11s. 3d., an increase of £91 14s. 4d. over that of last year. The expenditure on maintenance and repairs for the same period was £1,563 9s. 6d., an increase of £278 11s. as compared with that of last year. The total cash received was £1,462 13s. 8d. On account of payment in advance free water to the value of £69 14s. 2d. was supplied, and free water for washing-up was also supplied to the value of £120 8s. The total value of water supplied from this race during the year amounted to £1,649 13s. 5d. The average number of miners supplied with water was 38·25, a decrease of 5·75 on last year. The approximate quantity of gold obtained by parties using water from this race was 1,933 oz., valued at £7,442 1s.

The increase in the expenditure was almost all due to the damage done to the upper section last March, and to the heavy lignite-clay slip in Coalpit Gully in October, when seven of the hydraulic elevating claims and seven ground-sluicing parties were off fourteen days while the slip was being got rid of, thus reducing by over half the sales of water and revenue that would have been received during this month. To keep the race in good order, the damage done to the upper section in March had to be repaired during the year, also repairs to Mulholland's Gully flume and a timber retaining-wall had to be built to protect the main-race flume (at the crossing of the main gully) from floods. Also 54 ft. at intake end of siphon that crosses under the main road above the township had to be added to get more pressure to get the extra quantity required through.

Hard frost with 2 ft. of snow at the end of June put a stop to all mining. On the 16th August I started with the cleaning-out of the race and to widen a length of three miles and a half from Home Gully to Cemetery Point to enable the race to carry the quantity required on the east side of main gully, but on the night of the 18th it commenced to snow and freeze. The work had therefore to be suspended until the 24th August, when a start was again made. The reservoir was reached on the 3rd September, when the water was turned on from it, and the miners were at work in their claims on the 5th. During this month the Home Gully tunnel was retimbered and district-road crossings on the race and a good length of the old sodding in the race in the West Eweburn renewed. The siphon in Milkman's Gully was also finished. On the 3rd October the race got completely blocked by a large lignite-clay slip 5 chains long by 1 chain wide on east side of Coalpit Gully, starting the country on the lower side : arrangements were made with Mr. Matthew Young (who has a race at a much higher level) for water to sluice it away. By working day and night the water was got through on the night of the 18th, and the miners were at work again. Some of the bottom part of it I left, as when the top weight was taken off it it appeared to settle ; but in the event of its coming away at any time I made provision to meet it by putting a large box under the race to allow of any slipped ground being sluiced away without the race being interfered with.

Sixteen of the telescope pipes in the Wedderburn Siphon had to have bands put on them, as they started to leak. An extra pipe (9 in. diameter) had to be put in the Spec Gully race where the Burster Road crosses it to allow of more water being sent through. On account of the dry weather after the first week in January the water in the race kept falling off daily, and had to be supplemented from that in the reservoir. This demand ran the reservoir dry on the 22nd February, when the miners had to be put on week about from this date to the end of March, owing to the continued dry weather.

Eighteen elevating claims have been at work during the year (two of which got worked out), eleven of them being supplied from the Government race. Three parties have during the year been working in the Maori bottom ; one of them constantly, the other two intermittently. From the first week in January to the end of March the weather has been extraordinarily dry, and the whole water in the race was consequently reduced to eight heads at Naseby. This condition has been very hard on the private water-race owners. The number of days on which no water was supplied to the miners was —winter, 56 ; Christmas, 1 ; New Year, 1 ; Good Friday, 1 : a total of 59 days. The winter was a long and severe one.

BLACKSTONE HILL WATER-RACE.

The total sales of water from this race during the year amounted to £32 18s. 4d. The total cash received was £32 18s. 4d. The total cost of maintenance and repairs was £4 8s., caused by two small breaks and rabbit-burrows. As sandbanks are accumulating it will be necessary to have this and the side cleaned out in the spring. During the year only one party (R. Johnstone) has been receiving water from this race, which accounts for the falling-off in revenue. All the ground above Hill's Creek appears to be worked out.

I have, &c.,

The Under-Secretary, Mines Department, Wellington, R. MURRAY, Manager.

WATER-CONSERVATION.

Mr. T. PERHAM, A.M. Inst., C.E., to the UNDER-SECRETARY FOR MINES.

SIR,— Mines Department, Wellington, 22nd June, 1905.

I have the honour to forward my report on Water-conservation for the year ending the 31st December, 1904.

NORTH ISLAND.

As formerly reported for the year ending the 31st December, 1903, no other action has been taken with the extension of the Mackaytown reticulation or Golden Cross and Waikino domestic water-supplies. I consider these necessary and, from a sanitary point of view, urgent.

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Another examination has been made into the matter of the cyanide tailings from the Waihi, Karangahake, and the Waikino batteries causing flooding of the farm-lands on the banks of the Ohinemuri River, and the Waihou River from below Mackaytown, and round and about the Paeroa wharf as far as Netherton. Plans, and a general report with recommendations relative to the whole subject are now being prepared.

A report and plans have been forwarded on the domestic and power supply of water for the Thames Borough Council, but nothing has been done during the year towards carrying out the works.

South Island.

An examination has been made into the filtration scheme and works for the improvement of the water-supply of the Borough of Oamaru and a plan and report on the subject has been forwarded to this Department.

Reports, etc., for other Departments.

For the Marine Department an examination has been made and a report supplied on the unsafe and dilapidated condition of the wharf at the port of Havelock (Marlborough), embodying full recommendations for its partial or almost entire reconstruction. It is a somewhat difficult question to deal with, as the mud-flats are so extensive at low water, and the channel—which is the only waterway to and from the wharf—is very narrow and at all times intricate. Though well marked out by beacons, the channel is extremely shallow except at spring tides, and there is little or in fact no scour from the fall of the Kaituna River to in any way deepen it or keep it open and improve the upper reaches of Pelorus Sound at or near Havelock. This can only be done at considerable cost by dredging, and I do not think the existing trade of the port would justify any great expenditure.

Both imports and exports are timber and goods for domestic consumption (general at all these small ports on both coasts of the colony from north to south), and, owing to the want of adequate wharfage accommodation, the settlers often experience difficulty and even danger in landing requirements and shipping produce.

West Eweburn Reservoir.

This has been completely constructed and well fenced, but it has been lately reported that the crest of the dam has become depressed in the centre. This is a natural result due to the subsidence of the bank, and should be made up to the original level by top-dressing. The outlet pipes into the race to Naseby are working well, and the local branches are giving satisfaction to the sluicing and elevating claims on Hogburn Gully and neighbouring district.

Taking into consideration the extremely limited rainfall in this locality during the summer months, I think it would be a great advantage both for the present development of the mines at Rough Ridge and for the future irrigation of the arid portions of the Ida Valley, and certainly on the Maniototo plains, if a dam were built across Hill's Creek. The outlet pipes would just cut and the water enter the Manuherikia Race on its route to Naseby, and no doubt would be a benefit to the mining industry at present and the conservation of water for irrigation in the future, would be profitable to the farmer, and also to the Government. A charge per head at the present scale for water for mining purposes could be made to recoup the interest on the original expenditure.

This proposed reservoir by reason of its elevation would, I am of opinion, serve the German Hill sluicing-works in the Ida Valley, and, although the head race would be about twice the length of that running from the proposed Idaburn dam in the gorge, the benefit derived by the elevation and service to both the north and south ends of the valley, and a much larger storage would be of value both to the mining and farming interests.

A by-wash could be constructed in a convenient place with a regulating-sluice for the Ida Valley irrigation service when water is not urgently required for the sluicing claims in and around Naseby. If this dam be construtced there is no reason why the two industries should not be worked together for the benefit of all.

I have, &c.,

T. Perham, A.M. Inst. C.E., Engineer, Water-conservation.

The Under-Secretary, Mines Department, Wellington.

REPORT OF THE GOVERNMENT GEOLOGIST (ALEXANDER McKAY) FOR THE YEAR 1904–5.

The chief work of the past year was the ticketing and recording of the rock and fossil specimens that form the collections of the Geological Survey, now in the Colonial Museum, and preparing for the press copy and illustrations for a work on the "Rocks of Cape Colville Peninsula," the technical descriptions of which are by Professor Sollas, Oxford, England.

With respect to the collections in the Museum—when a change in the staff of the Geological Survey took place in 1892, the systematic arrangements of the rocks and fossils, though commenced several years prior, was incomplete, owing to the fact that the working-out of the collections made each year, the preparation of reports, &c., occupied most of the winter months, and the all-important matter of a systematic arrangement and detailed catalogue was pursued only during short intervals, often interrupted by what was considered more pressing work.

It was the usual practice to work out the fossils of the various collections, determine roughly how many species each contained, make a selection for exhibition, and store the less showy and surplus part of the collection. In this way between thirty and forty thousand specimens were placed on show, and there was accumulated in store from one hundred and fifty to two hundred thousand more.

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At first the specimens were ticketed with a number in aniline ink, the fugitive character of which under a strong light is one cause why the greater part of the collections must be re-ticketed if their identity is to be preserved.

Since the retirement of Sir James Hector, the appointment of Mr. Hamilton to the control of the Museum, and Dr. Bell as Director of the Geological Survey, it has become apparent that the mineral and fossil specimens must be housed elsewhere than in their present location, more especially the stored specimens which were simply repacked in the boxes in which they arrived from the field.

Nine thousand seven hundred and fifty rock and mineral specimens, and 36,750 fossil specimens, have been ticketed, recorded, and packed in boxes of uniform size, which, although at present stored in one pile, may, on provision of proper racks, be so arranged that any box or specimen may be reached without serious delay and loss of time. The work, however, is far from completed, but is being steadily and continuously proceeded with, such assistance as other matters will at present admit of being utilised for this purpose.

The work on the rocks of Cape Colville Peninsula will shortly be completed. One volume has been issued from the press of the Government Printing Department, and the other will shortly follow.

ALEX. MCKAY,
Government Geologist.

22nd June, 1905.

BATTERY-SUPERINTENDENTS' EXAMINATION PAPERS.

QUESTIONS USED IN EXAMINATION OF BATTERY-SUPERINTENDENTS FOR CERTIFICATES.

SUBJECT A.—*The Different Modes of reducing and pulverising Ores.*

1. State where and by whom you were employed, and the dates you were engaged in crushing batteries where bullion was recovered by cyanide-of-potassium treatment.
2. Show by sketch and describe fully how you would construct a crushing-battery of 30 heads of stamps, 12 Frue vanners, and also a modern cyanide plant to treat the pulverised ore and slimes, with all necessary appliances.
3. If you were using a Pelton water-wheel as a motive power to drive a battery of 40 heads of stamps of 1,000 lb. each, to have a drop of 7 inches and make 99 blows per minute, show by calculation the diameter of a nozzle you would require to discharge the water on to the wheel under a head of 200 feet to give the necessary effective horse-power to do the work.
4. If you had to purchase a steam-engine to do the work in the last question, show by calculation the diameter of a cylinder required to give the necessary effective horse-power, the piston speed being 450 feet per minute, the initial pressure of steam entering the cylinder being 100 lb. per square inch and cut off at half-stroke.
5. State the description of other crushing-machines and concentrators you have used. Give their proper speed, and horse-power required to work them.
6. Give the capacity or quantity of ore that each of the following machines will pulverise per day of 24 hours, the ore to go through a 40-mesh grating; and give the horse-power required to work them: Huntingdon mill, 5 feet diameter, and a Krupp mill. State the speed that each mill is worked at.

SUBJECT B.—*Amalgamating-machines.*

1. Describe the action of a Watson-Denny pan, the speed required to work it, the quantity of quicksilver required to be used, the quantity of ore it is capable of treating in 24 hours, and the horse-power required to work it.
2. State in detail the method of recovering gold from slimes on canvas tables. Show how the gold is collected, and the process the ore passes through until the gold is fit for market.
3. State the different actions of the McKay, Combination, and Wheeler pans, giving the difference between them and the Watson-Denny pan; also state the use of settler, and how it is worked.
4. If you were using any of the amalgamating-pans above referred to to work ore in charges, state the time required to work each charge, giving full details of the operation and how the bullion amalgam is collected.
5. State the advantage or otherwise of using chemicals in pan amalgamation. Give a description of the chemicals you would use and how they are applied.

SUBJECT C.—*The Use of Quicksilver, and Methods of using it in connection with the Extraction of Gold and Silver from Ores.*

1. Describe what effect, if any, has lead, antimony, zinc, and arsenical ores on quicksilver used for the amalgamation of gold and silver.
2. How are copper plates prepared for amalgamating purposes, and how is the bullion amalgam removed? Also, how would you remove the whole of the bullion from the plates at the final clean-up?

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3. Describe fully how you would construct copper-plated tables for amalgamation. Give their width, length, and gradient to take the crushed ore from 5 heads of stamps. Also state how the copper plates are made fast to the tables, and give the thickness of copper plate you would use, with your reasons for same.

4. What effect, if any, has an electrical action on quicksilver? Also state how you would apply a current of electricity in quicksilver used for amalgamating purposes.

5. Describe fully how you would separate bullion from quicksilver, and the process it undergoes before it is in ingots fit for market.

SUBJECT D.—*Cyanide, Chlorination, and other Chemical Processes of recovering Gold and Silver from Ores.*

1. Show by sketch a modern cyanide plant, with all accessories for treating auriferous ores. Give the dimensions of every part of the plant, and show the position each portion should be placed in relative to each other.

2. State fully how you would treat slimes, and give your reasons for same.

3. Describe fully how stock KCN solutions are made up, and how they are used.

4. How do you ascertain the strength of KCN solutions?

5. If you were making up a 0·8 KCN solution of 40 tons, how many lb. of crude salt containing 69 per cent. KCN would you require to make a working-solution of 0·25 per cent. KCN?

6. How many tons of a 12-per-cent. KCN solution would you require to make up 50 tons of a sump solution containing 0·02 per cent. KCN to 0·15 per cent. KCN?

7. If you had 36 tons of a sump solution containing 0·01 per cent. KCN, how many tons of 0·9-per-cent. solution would be required to make the solution up to 0·3 per cent. KCN?

8. Describe fully how cyanide-solutions are applied to pulverised ores, and how the solutions are drawn off; also, how slimes are treated with KCN solutions, and how such solutions are extracted.

9. State how you recover gold and silver from KCN solutions, and the percentage of each of these metals that is generally recovered in ordinary practice.

10. Show by calculation the diameter of a circular vat to hold 170 tons of pulverised ore, allowing the ore to be 5 feet deep and 25 cubic feet of ore to the ton.

11. Describe what remedies you would apply if any of the workmen showed signs of KCN poisoning.

12. What is meant by a chlorination plant to treat auriferous ores? How is it constructed? What preparation has the ore to receive before being subjected to chlorine gas?

13. How is chlorine gas generated, and how is the gas applied to the ore? Describe fully.

14. How is the bullion recovered from both chlorine and cyanide solutions, and how is it prepared fit for market.

SUBJECT E.—*Sampling and Testing of Ores.*

1. Describe exactly how you would obtain a sample for assay from a ton of ore.

2. Describe how you would estimate the gold and silver in a free-milling ore.

3. What tests would you apply to detect the following metals when occurring singly in rocks: Tin, platinum, mercury, lead, copper, cobalt, iron, manganese, barium?

4. How would you estimate the tin in tin-stone?

SUBJECT F.—*A Knowledge of Arithmetic and the Method of keeping Battery Accounts.*

1. Twelve hundred tons of ore had an average assay of 1 oz. 11 dwt. 5 gr. of gold and 11 oz. 14 dwt. 12 gr. of silver per ton; by the ordinary process of treatment 91 per cent. of the gold was saved and 37 per cent. of the silver: how much gold and silver was recovered from the 1,200 tons of ore?

2. If 1,000 oz. bullion contained gold 0·2237 fine and silver 0·7763 fine—the gold was worth £4 4s. 3d. per oz. and silver 2s. 3d. per oz.: require the value of the bullion.

3. The wages in a battery where 30 men were employed amounted to £500 a month; there were four different rates of wages, which may be termed A, B, C, and D divisions; there were 14 men in A division, 9 men in B division, 3 men in C division, and 4 men in D division; each man in B division got $\frac{3}{16}$ of the wages of each man in A division, each man in C division got $\frac{7}{8}$ of the wages of each man in B division, and the four men in D division got $\frac{9}{16}$ of the wages of each man in C division: how much did each man in the different divisions receive?

4. A pyramid of gold was 2 feet square at the bottom, and stood 5 feet 6 inches high: how many ounces did the pyramid contain, taking the specific gravity of the gold to be 19?

5. Divide ·00963 by 128, and extract the cube root of the quotient.

SUBJECT G.—*A Knowledge of Part V. of "The Mining Act, 1898."*

Oral.

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LIST OF MINE-MANAGERS AND BATTERY-SUPERINTENDENTS WHO HAVE OBTAINED CERTIFICATES UNDER THE MINING ACTS.

THE MINING ACT.

First-class Service Certificates.

Issued under "The Mining Act, 1886," without Examination.

Adams, H. H., Waiorongomai.
*Anderson, P., Thames.
*Andrews, R., Coromandel.
Andrews, T., Thames.
Barclay, T. H., Thames.
Bennett, J., Alexandra.
Benney, J., Coromandel.
Black, T., Waiomo.
Bollersley, N., Boatman's.
Bradbury, M., Reefton.
Bray, John, Lyell.
Burch, W. H., Thames.
Byrne, J. F., Stafford.
Cameron, A., Macetown.
*Cameron, E., Te Aroha.
Chapman, J. A., Dunedin.
Clarke, G. S., Thames.
*Comer, R., Thames.
Conradson, M., Lyell.
*Corin, W., Thames.
Cornes, C. A., Karangahake.
Coutts, J., Thames.
Crawford, T. H., Thames.
Crowley, C., Reefton.
Cummings, W., Reefton.
Davis, J. E., Queenstown.
*Davey, C., Ross.
*Donald, J., Cromwell.
Dryden, S., Thames.
Dunlop, T. A., Thames.
Edwards, J., Skipper's.
Elliott, J., Macetown.
*Evans, F., Skipper's.
Evans, J. H., Skipper's.
*Fitzmaurice, R., Reefton.
Frewen, J. B., Queenstown.
Gavin, T., Te Aroha.
Gilbert, J., Reefton.
Gilmour, T., Thames.
Giles, G. F., West Wanganui.
Glass, W. M., Naseby.
Goldsworthy, J., Waiorongomai.
Greenish, J., Reefton.
*Greenville, W., Ohinemuri.
*Hall, J. P.
*Hansen, P. C., Thames.
Harris, J., Owen's Reefs.
Harrison, R. H., Coromandel.
*Hicks, T. B., Thames.
Hilton, G. P., Bendigo.
*Hodge, F., Coromandel.
Hollis, W., Thames.
Hunter, R., Thames.
James, F., Thames.
Jamieson, A., Coromandel.
Jenkins, M., Wakatipu.
Johnstone, H., Bluespur.
Julian, J., Boatman's.
Kelly, J., Lyell.
Kerr, J., Thames.
Lawn, E., Black's Point.
*Lawn, H., Boatman's.
Lawn, J., Reefton.
*Littlejohn, W., Karangahake.
Lowe, E. W., Thames.
Malfroy, J. M. C., Ross.
Martin, W. G., Thames.
McCallum, J., Reefton.
McCullough, R., Thames.
McGruer, G. N., Karangahake.
*McIlhaney, J., Thames.
McIntosh, D., Bluespur.
McKay, J., Ross.
McKenney, J., Reefton.
McKenzie, W., Thames.
*McLeod, G., Coromandel.
McLiver, F., Thames.
*McLiver, H., Thames.
McMaster, J., Reefton.
Moore, H. W., Thames.
*Moore, J. H., Thames.
Morgan, R., Otago.
Morrisby, A. A., Glenorchy.
Nasmyth, T., Reefton.
Newman, W., Naseby.
Northey, J., Thames.
*O'Sullivan, D. E., Thames.
Polton, A., Karangahake.
Porter, J., Waipori.
Purvis, G., Ross.
Quinn, E., Te Aroha.
Radford, T., Thames.
Ralph, J. G., Thames.
Ranger, J., Reefton.
Rasmussen, C. L., Mokihinui.
Rasmussen, C. P., Mokihinui.
Reid, P., Coromandel.
Resta, L., Macetown.
Roberts, E., Ross.
Rooney, F., Reefton.
Scott, T., Waiorongomai.
Searight, A., Reefton.
*Senior, J., Thames.
Smith, J. E., Thames.
Stone, F., Karangahake.
Steedman, J. B., Thames.
Sturm, A., Waipori.
Taylor N., Thames.
Todd, C., Heriot.
Treloar, J. S., Reefton.
Tripp, R. S., Arrowtown.
Vivian, J. G., Thames.
Vivian, S., Reefton.
*Waite, C. D., Thames.
*Waite, E., Thames.
Walker, J. W., Thames.
Watson, T., Reefton.
Wearne, J. E., Endeavour Inlet.
Wearne, T., Endeavour Inlet.
*Wilcox, J., Thames.
Williams, J., Skipper's.
Wright, G., Boatman's.
Wylie, W., Ross.
Young, G., Skipper's.

First-class Mine-managers' Certificates, issued after Examination, under "The Mining Act, 1886," and Amendment Acts.

Adams, B., Thames.
Baker, W., Thames.
Black, G., Reefton.
*Caples, P. Q., Reefton.
*Carter, J., Thames.
Casley, G., Reefton.
Cochrane, D. L., Reefton.
*Colebrook, J. D., Coromandel.
Coombe, J., Reefton.
Crawford, J. J., Thames.
Cummings, W., Reefton.
Donaldson, W., Otago.
Fleming, M., Thames.
Gardner, W. P., Reefton.
Harris, W., Thames.
Horn, G. W., Thames.
Horne, W., Coromandel.
Hornick, M., Thames.
Hosking, G. F., Auckland.
Kruizenza, W., Reefton.
Lawn, T., Reefton.
Logan, H. F., Wellington.
Mangan, T., Thames.
Mouat, W. G., Dunedin.
Truscott, G., Thames.
Watkins, W. E., Reefton.
Wilkie, J., Reefton.

First-class Mine-managers' Certificates, issued on Production of Certificate from a Recognised Authority outside the Colony, under "The Mining Act, 1886," "The Mining Act, 1891," and "The Mining Act, 1898."

Argall, W. H., Coromandel.
Beckwith, L. H., Wellington.
Datson, J., Manaia.
Dodd, William Milton.
Griffiths, A. P., Auckland.
Griffiths, H. P., Auckland.
Hailey, R. C., Dunedin.
McKenna, Thomas, Dunedin.
Molineaux, H. S., Gore.
Rich, F. A., Auckland.
Williams, W. H., Auckland.

First-class Mine-managers' Certificates, issued after Examination, under "The Mining Act, 1891."

Agnew, J. A., Thames.
Annear, William, Reefton.
Bennett, E. P., Thames.
Boydell, H. C., Coromandel.
Bradley, R. J. H., Te Puke.
Bray, E., Thames.
*Bruce, Malcolm, Thames.
Carroll, J., Lyell.
Cartwright, E., Thames.
Crabb, J., Reefton.
*Dobson, J. A., Auckland.
Evans, H. A., Wellington.
Fahey, P., Reefton.
Flannigan, Francis, Reefton.
Gilmour, J. L., Thames.
Hodge, J. H., Thames.
*Hughes, D., Thames.
James, T., Thames.
Keam, P. E., Thames.
Lane, J., Reefton.
Lawn, C. H., Capleston.
Linck, F. W., Thames.
Marshall, F., Reefton.
Morrison, R., Thames.
McDermott, J., Thames.
McDermott, G., Thames.
McDermott, W., Thames.
McGregor, W. T., Thames.
McKenzie, H. J., Coromandel.
McPeake, J., Thames.
O'Keeffe, M. D., Thames.
Paul, Matthew, Thames.
Paltridge, Henry, Thames.
Prince, F. H., Reefton.
Robertson, D. B., Stafford.
Ross, Richard, Thames.
Russell, Murray, Dunedin.
Shepherd, H. F., Thames.
Stanford, W. J., Macetown.
Steedman, J. G., Thames.
Sutherland, Benjamin, Reefton
Tierney, R., Thames.
Vialoux, F., Coromandel.
Warne, George, Thames.
Waters, D. B., Skipper's.
Watt, J., Thames.
White, G. H., Thames.
Whitley, A., Thames.
Williams, C., Capleston.

* Deceased since issue of certificate.

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FIRST-CLASS SERVICE CERTIFICATES AS MINE-MANAGERS—*continued.*

First-class Mine-managers' Certificates, issued after Examination, under "The Mining Act, 1898."

Arscott, R., Waihi.
Allen, Henry, Waihi.
Barker, B., Thames.
Bennie, Boyd, Waihi.
Blenkhorn, C., Coromandel.
Bolitho, Joseph, Reefton.
Bower, J. W., Coromandel.
Buddle, Frank, Coromandel.
Bull, C. W., Waihi.
Carroll, A. M., Reefton.
Carter, R. P., Waihi.
Clouston, R. E., Kaitangata.
Cooper, J. H., Thames.
Cooper, Thornhill, Waihi.
Cordes, F. M., Karangahake.
Docherty, W. H., Coromandel.
Ellery, John, Reefton.
Evered, N. J., Waihi.
Fry, S., Waimangaroa.
George, M. T., Waihi.
Grayden, P., Thames.
Goldsworthy, C., Karangahake.
Hooker, John, Coromandel.
Hitchcock, W. E., Barewood.
Irwin, Samuel, Waihi.
Jackson, G. T., Waihi.
Johnson, J. H., Coromandel.
Langford, G. S., Waihi.
Lawn, Nicholas, Reefton.
McConachie, W., jun., Waihi.
MacDuff, R. B., Thames.
MacLaren, J. A. J., Coromandel.
McMahon, J. H., Reefton.
McMahon, T., Reefton.
Morrison, William, Waihi.
Moye, Michael, Reefton.
O'Sullivan, J. W., Thames.
Rabe, John, Thames.
Stewart, F., Waihi.
Thomson, Thomas, Waihi.
Tucker, E. S., Coromandel.
Turnbull, E. V., Coromandel.
Turner, C. E., Murchison.
Watson, J. L., Thames.
Webber, J. H. A., Reefton.
Weir, Thomas, Waihi.
Whyte, N. McG. H., Waihi.
Williams, C., Thames.
Wilson, Allan, Thames.
Wood, P. H., Reefton.

First-class Mine-managers' Certificates, issued under Section 318 of "The Mining Act, 1891."

Edwards, George, Westport.
Hornibrooke, H. P., Coromandel.
Martin, James, Reefton.
Rickard, John, Thames.
Snow, Thomas, Huntly.
Thomas, James, Thames.
Trelease, J. H., Thames.
Williams, John, Kuaotunu.
White, John S., Karangahake.

First-class Mine-managers' Certificates of Competency granted to Holders of Provisional Warrants under Section 32 of "The Mining Act Amendment Act, 1896."

Alexander, Thomas, Deep Creek.
Argall, A. E., Coromandel.
Battens, H., Coromandel.
*Begley, Thomas, Reefton.
Bennett, Charles Henry, Kuaotunu.
Bunney, Joseph, Waihi.
Campbell, Alexander, Cullensville.
Carlyon, Samuel, Coromandel.
Cornes, C. A., jun., Karangahake.
Daldy, Edward Arthur, Coromandel.
Draffin, Samuel, Waitekauri.
Farmer, C. S., Waitekauri.
Goldsworthy, Thomas, Tokatea.
Goldsworthy, William, Karangahake.
Govan, Joseph, Thames.
Harvey, A. G., Coromandel.
Howard, Samuel, Karangahake.
James, Robert, Thames.
Jamieson, John, Reefton.
Johns, Thomas, Waihi.
Kennerley, W. H., Thames.
Langford, James, Coromandel.
McCombie, John, Karangahake.
MacDonald, H., Coromandel.
McEnteer, James, Tararu.
McFarlane, Charles M., Tokatea.
McLean, Benjamin J., Waitekauri.
McLean, Charles, Thames.
McLean, James, Tararu, Thames.
Meehan, James, Westport.
Moorecraft, Walter, Coromandel.
Morgan, William, Owharoa.
Moyle, Thomas, Thames.
Patton, William, Macetown.
Pearce, Francis, Reefton.
Potter, William H., Thames.
*Rabe, Henry, Karaka.
Rillstone, Charles, Waipori.
Somervell, John, Thames.
Stackpole, Robert, jun., Karangahake.
Thomas, Archelaus, Tapu, Thames.
Turnbull, Thomas A., Whangamata.
*Willets, Henry, Thames.
*Wilson, James R. S., Kuaotunu.

First-class Mine-managers' Certificates, issued to Inspectors of Mines, by virtue of Office under the Mining Acts, 1886, 1891, and 1898.

Binns, G. J., Dunedin.
Cochrane, N. D., Westport.
Gordon, H. A., Wellington.
*Gow, J., Dunedin.
Green, E. R., Dunedin.
Hayes, J., Dunedin.
McLaren, J. M., Thames.
Tennent, R., Westport.
Wilson, G., Thames.

SECOND-CLASS SERVICE CERTIFICATES AS MINE-MANAGERS.

Issued under "The Mining Act, 1891."

Adams, W. J., Thames.
Agnew, J. A., Coromandel.
Allen, Richard, Reefton.
Argall, A. E., Coromandel.
Bennett, C. H., Coromandel.
Begley, Thomas, Reefton.
Beard, W. T., Reefton.
Bone, William, Reefton.
Bowler, John, Thames.
Blair, Thomas, Kuaotunu.
Bray, Edwin, Reefton.
Brownlee, Thomas James, Thames.
Brokenshire, James, Thames.
Bolitho, James, Reefton.
Brown, John, Macrae's.
Bremner, John, Coromandel.
Borlase, J. H., Capleston.
Bunny, Joseph, Thames.
Byrne, John, Karangahake.
Caird, Alexander McNeil, Reefton.
Campbell, J., Kuaotunu.
Climo, Noah, Coromandel.
Comer, George, Thames.
*Cowan, Hugh, Kuaotunu.
Corbett, T., Paeroa.
Comer, W. W., Thames.
Crabb, Thomas, Reefton.
Daniel, P. F., Greymouth.
Dobson, John Allen, Kuaotunu.
Edwards, George, Westport.
Ellery, John, Reefton.
Flannigan, Francis, Reefton.
Foster, Thomas, Wellington.
*Gale, C. W., Coromandel.
Gill, George, Thames.
Glasgow, T. M., Thames.
Goldsworthy, Henry, Thames.
Govan, Joseph, Thames.
Griffin, Patrick, Thames.
Grimmond, Joseph, Ross.
Goldsworthy, William, Mauku, Auckland.
Gemmings, Charles, Thames.
Gribble, James, Norsewood.
Guthrie, John, Wellington.
Guy, Robert, Kuaotunu.
Harvey, William, Reefton.
Hardman, James Edward, Thames.
*Harris, R., Thames.
Hetherington, William, Thames.
Hicks, W., Thames.
Hill, Alex. Grey, Waikakaho.
Hore, John, Wellington.
Hollis, Fred. J., Waihi.
Hornibrook, H. P., Kuaotunu.
Jamieson, John, Reefton.
Johnstone, William, Collingwood.
Jobe, James, Thames.
Johns, Thomas, Thames.
Kendall, Henry, Thames.
Kerr, George, Kamo.
Kirker, Thomas, Thames.
Laughlin, David, Thames.
Law, John, Thames.
*Lough, H., Thames.
Loughlin, S., Thames.
McLean, James, Thames.
McLean, Alex., Coromandel.
McLean, Charles, Thames.
*McCormick, Charles, Coromandel.
McQuillan, John, Reefton.
McNeill, Daniel, Thames.
McNeill, George, Upper Kuaotunu.
McCombie, John, Karangahake.
McEwen, James, Reefton.
McLoghry, Archibald, Karangahake.
Mackay, William, Nenthorn.
Martin, James, Reefton.
Meagher, John, Karangahake.
*Mills, George, Thames.
Mayn, John, Coromandel.
Martin, David, Black's Point.
Morgan, William, Upper Thames.
Moorecroft, Thomas, Thames.
Milne, John, Thames.
Moyle, Thomas, Thames.
Naysmith, James, Reefton.
Newdick, Alfred, Thames.
Notman, Alexander, Reefton.
O'Keefe, M. W. D., Thames.
Page, John, Lyell.
Parkiss, Jos. W., Reefton.
Potts, W. H., Thames.
Primrose, J., Kuaotunu.
Pettigrew, Robert, Sydney.
Peebles, Alexander, Kuaotunu.
Phillips, W. H., Thames.
*Pollock, John, Thames.
Rabe, Henry, Thames.
Reid, Thomas Groat, Thames.
Rickard, John, Thames.
Richards, A. H., Kuaotunu.
Radford, Thomas, Thames.
Rogers, Charles Henry, Reefton.
Rogers, William Henry, Kumara.
Ross, J., Thames.
*Rowe, James, Thames.
Shaw, James, Karangahake.
Sligo, Alex., Nenthorn.
Thomas, James, Thames.
Thomas, A., Thames.
Thomson, John, Dunedin.
Tregellas, James, Reefton.
Tregoweth, William, Thames.
Wells, Charles Lewis, Thames.
Willets, Henry, Thames.
Williams, James, Thames.
Williams, John, Thames.
Whisker, Charles, Thames.
White, John S., Karangahake.
*Wilson, James R. S., Kuaotunu.
Wilson, J. G., Thames.
Woodcock, James, Thames.
Worth, Robert, Waihi.

*Deceased since issue of certificate.

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SECOND-CLASS SERVICE CERTIFICATES AS MINE-MANAGERS—*continued.*

Second-class Mine-managers' Certificates, issued after Examination, under "The Mining Act, 1891."

Benney, J., jun., Paeroa.
Christie, William, Waitekauri.
Draffin, S., Waitekauri.
Dunkin, T., Coromandel.
Evans, H. A., Skipper's.
Gatland, V. Y., Coromandel.
Mathewson, A., Hyde.
McNeil, A. H., Coromandel.
White, F. H., Kuaotunu.
White, G. H., Thames.

Second-class Mine-managers' Certificates, issued after Examination, under "The Mining Act, 1898."

Bennie, Boyd, Coromandel.
*Cahill, T. M., Upper Kuaotunu.
Carroll, John, Upper Kuaotunu.

Second-class Mine-managers' Certificates, issued under Section 313 of "The Mining Act, 1891."

Connon, William, Thames.
Coran, Henry, Thames.
Edwards, E., Coromandel.
Kelso, Archibald, Coromandel.
McCormick, W. J., Waitekauri.

Second-class Mine-managers' Certificates of Competency granted to Holders of Provisional Warrants under Section 32 of "The Mining Act Amendment Act, 1896."

Allen, W. J., Coromandel.
Barney, Montague T., Waitekauri.
Brownlee, Henry, Thames.
Collins, Charles, Waitekauri.
Curtis, Charles, Taylorville.
Davis, James, Coromandel.
Gardner, James, Waimangaroa.
Howe, Albion S., Waitekauri.
Johnson, Frank H., Collingwood.
Kirwan, William, Reefton.
McDonald, John, Tairua.
McInnes, John, Puriri.
Martin, William, Tararu, Thames.
Murphy, Joseph, Coromandel.
O'Brien, John, Westport.
Prescott, Arthur J., Coromandel.
Radford, Samuel, Waihi.
Ruffin, Richard, Manaia, Coromandel.

BATTERY-SUPERINTENDENTS' CERTIFICATES.

Issued under "The Mining Act 1891 Amendment Act, 1894," without undergoing Examination.

Adams, H. H., Waihi.
Aitken, R. M., Reefton.
Banks, Edwin Gripper, Waihi.
Barry, Hubert Percy, Waihi.
Goldsworthy, Henry, Kuaotunu.
Goldsworthy, John, Kuaotunu.
Greenway, H. Howard, Auckland.
Heard, G. St. Clair, Waihi.
Hope, John S., Waitekauri.
Hutchison, William, Karangahake.
Margetts, Frederick Ernest, Kuaotunu.
McKenna, T. N., Tararu.
McLellan, William, Waitekauri.
Mellett, Richard Sheridan, Waitekauri.
Napier, James, Karangahake.
Noble, James R., Karangahake.
Park, James, Thames.
Shepherd, Henry Franklin, Waihi.
Sims, C. F., Tararu.
Walker, James A., Kuaotunu.
Wilson, Arthur E., Waihi.
Wilson, James Kitchener, Auckland.

Battery-superintendents' Certificates, issued after Examination, under "The Mining Act 1891 Amendment Act, 1894."

Adams, A. A., Thames.
Allen, F. B., Thames.
Allom, H. O., Thames.
Ansley, Comyn, Paeroa.
Ansley, Walter, Thames.
Banks, J. H., Waihi.
Bowers, W., Thames.
Brown, A. E., Thames.
*Carter, Samuel, Thames.
Clarke, J. L., Thames.
Clarke, R., Waitekauri.
Clarke, W. J., Waihi.
Day, A. T., Thames.
Dixon, Clement, Waihi.
Doveton, G. D., Thames.
Fleming, G. C. S., Thames.
Fuller, J. P., Kuaotunu.
Gray, J. W., Waihi.
Hayward, F. W., Komata.
Horn, G. W., Kuaotunu.
Jackson, J. H., Paeroa.
Jones, Achison, Waihi.
Kidd, F. D., Thames.
Laurie, D. B., Karangahake.
Lee, J. W., Reefton.
Macdonald, W., Waihi.
McKenzie, H. J., Thames.
McMicken, S. D., Thames.
Morgan, P. G., Thames.
Morrin, W. S., Thames.
Noakes, H. L., Waihi.
Raithby, R. W., Reefton.
Robinson, J. R., Waitekauri.
Stafford, B. H., Waihi.
Taylor, C. H., Tararu.
Thorpe, A. H., Thames.
Vercoe, R. B., Thames.
Wingate, H. M., Maratoto.
Winslow, G., Thames.
Williams, A. G. R., Thames.

Battery-superintendents' Certificates, issued after Examination, under "The Mining Act, 1898."

Adams, J. H., Thames.
Airey, Hubert, Karangahake.
Allen, D. V., Thames.
Allen, H. E., Wellington.
Auld, J. B., Crushington.
Baker, W. H., Thames.
Banks, C. A., Waihi.
Banks, E. J., Thames.
Barrance, K. McK., Karangahake.
Barrett, J. J., Karangahake.
Barron, Wm. E., Waikino.
Baskett, E. G., Karangahake.
Bidlake, A. E., Waiomo.
Bishop, T. O., Reefton.
Blackadder, Wm., Crushington.
Bradley, R. J. H., Karangahake.
Browne, E., Waitekauri.
Brown, F. M., Karangahake.
Brown, J. E., Komata.
Burns, William, Waiomo.
Bush, E. F., Parawai.
Bush, H. R., Thames.
Campbell, Colin, Thames.
Carpenter, W. E., Karangahake.
Carter, S., Waihi.
Carroll, John, Kuaotunu.
Chappell, G. A., Karangahake.
Clark, John L., Waihi.
Coote, J. M., Thames.
Corbett, G. L., Waitekauri.
Couper, J., Thames.
Cowles, R. K., Crushington.
Crompton, H., Maratoto.
Croucher, Herbert, Waihi.
Dawson, B., Ellerslie.
Donnelly, Thomas, Waihi.
Draffin, Eugene, Kuaotunu.
Ellis, L. L., Waitekauri.
Empson, J. B., Karangahake.
Evans, J., Waihi.
Evans, W. B., Reefton.
Ewen, H. F., Auckland.
Fletcher, H. T., Katikati.
Fraser, J. M., Reefton.
Fuller, John P., Kuaotunu.
Fyfe, A., Dunedin.
Gardner, E. A., Reefton.
Gilpin, J., Waihi.
Gow, E. A., Crushington.
Grayden, J., Waitekauri.
Grayden, Peter, Thames.
Grumitt, P. H., Thames.
Gwilliam, Ben., Karangahake.
Halliwell, L. V., Karangahake.
Hargraves, E. P., Waihi.
Hay, Adam, Karangahake.
Hazard, T. R. C., Waitekauri.
Hitchcock, W. E., Barewood.
Hogg, B., Karangahake.
Hogg, T. R., Karangahake.
Horn, G. W., Kuaotunu.
Jones, R. D., Karangahake.
Kidd, R. B., Waitekauri.
Kingsford, A., Karangahake.
Langford, G. S., Waikino.
Launder, G. H., Waitekauri.
Lawless, L. J., Paeroa.
Littlejohn, W. D., Karangahake.
Lovelock, J. E., Crushington.
Mackay, John, Crushington.
Maltman, A., Reefton.
McEwin, J. A., Reefton.
McNeil, A. R., Karangahake.
Montgomery, A. E., Opitonui.
Motherwell, Wm., Waihi.
Moyle, W. T., Upper Tairua.
Orbell, G. S., Waikouaiti.
Paltridge, F., Thames.
Pond, H. C., Auckland.
Porteous, J., Crushington.
Quick, J. N., Thames.
Reid, J. E., Great Barrier.
Reynolds, E. A., Auckland.
Roberts, H. C., Waihi.
Rodden, Wm., Lyell.
Rosewarne, R. H., Thames.
Royse, W. G., Reefton.
Sanford, A. G., Waihi.
Shaw, D. S., Waikino.
Stephens, H., Dunedin.
Sutherland, J. A., Reefton.
Thomson, G. W., Bendigo.
Thurlow, J. R., Coromandel.
Tomlinson, A., Karangahake.
Tomlinson, W. F., Dunedin.
Turnbull, E. V., Waihi.
Ulrich, G. A. C., Komata.
Ulrich, Herstall, Whangapoua.
Waters, D. B., Waihi.
Watson, A. B., Waitekauri.
Watson, A. P., Crushington.
Watson, J. R., Reefton.
White, A. S. H., Karangahake.
Wilson, A. P., Crushington.
Williams, A. C. Waihi.

* Deceased since issue of certificate.

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Dredgemasters' Certificates, without Examination, issued under "The Mining Act, 1898," and Amendment Acts, 1901 and 1903.

Allen, Chas., Alexandra.
Anderson, L. C., Alexandra.
Andrews, Ralph, Canvastown.
Baker, J. R., Alexandra.
Ballantyne, D., Miller's Flat.
Barnes, T. J., Beaumont.
Barry, Thos., Clyde.
Bradley, Neil, Alexandra.
Bennett, Geo., Gore.
Bennett, James, Kumara.
Blue, G. P., Alexandra.
Brand, Peter, Waikaka.
Bremen, Philip, Palmerston S.
Bremner, A. P., Lower Shotover.
Brice, Wm. H., Cromwell.
Bringans, D., Alexandra
Brown, T. G., Ahaura.
Bunting, James, Murchison.
Busbridge, P., Gore.
Butler, Ewen, Roxburgh.
Butler, M. J., Kanieri.
Cameron, Saml., Alexandra.
Clarke, Ed., Port Chalmers.
Compton, Albert, Dobson.
Cormack, W., Greymouth.
Cowan, James, Nelson Creek.
Cornish, J. T., Miller's Flat.
Coutts, Henry, Miller's Flat.
Cowan, Alexander, Stillwater.
Crookston, W. L., Three-channel Flat.
Crowley, J. B., Edendale.
Cumming, J. C., Beaumont.
Cunningham, Geo., Kanieri.
Curtis, Chas., Stillwater.
Cutten, W. H., Dunedin.
Deniston, R. A., Cromwell.
Dewar, John, Alexandra.
Donaldson, J. G. A., Greenstone.
Edmonds, A. R., Nelson Creek.
Faithful, Wm., Greymouth.
Gibb, Wm., Croydon Siding.
Gibson, A., Island Block.
Goodger, G. W., Waenga.
Graham, J. M., Gore.
Grogan, Wm. A., Miller's Flat.
Hansen, Wm., Alexandra.
Hay, James, Dunedin.
Hedley, A., Cromwell.
Herbert, J., Beaumont.
Hewitt, James, Clyde.
Hogg, Thos., Cromwell.
Hoskins, Thos., Maori Point.
Hoy, Samuel, Alexandra.
Inwood, W. J., Rocklands Beach.
Johnston, E. A., Alexandra.
Johnstone, Alexander, Cromwell.
Keen, Thos., Clyde.
Kennedy, Angus, Alexandra.
Kitto, Ed. T., Miller's Flat.
Kitto, Francis, Lowburn.
Kitto, Jno. F., Miller's Flat.
Kitto, W. H., Cromwell.
Kloogh, N. P., Lowburn Ferry.
Lawson, Ed., Dunedin.
Ledingham, J., Bannockburn.
Lee, George, Collingwood.
Lidicoat, R. H., Fern Flat.
Louden, Alexander, Clyde.
Luke, S. J., Alexandra.
Magnus, A., Roxburgh.
Magnus, Olaf, Box 130A, Christchurch.
Mailer, John, Stillwater.
Maitland, A. E., Miller's Flat.
Maxwell, John, Dunedin.
McClure, F. C., Rongahere.
McConnell, J., Cromwell.
McCormack, D., Kanieri.
McDonald, E. A., Waitiri.
McDonald, J., Sofala.
McDonald, Jno., Cromwell.
McGeorge, J., Dunedin.
McGeorge, Alexander, Dunedin.
McGregor, D., Kanieri.
McGregor, G. R., Alexandra.
McIntosh, D. J., Lowburn Ferry.
McLay, Geo. Cromwell.
McLean, D., Waitiri.
McMath, D. C., Ross.
McMath, Thos., Alexandra.
McVicar, Peter, Roxburgh.
Mills, Ed., Murchison.
Mitchell, D. A., Dunedin.
Morel, C. G., Inangahua Junction.
Morris, G. S., Cromwell.
Murray, D., Clyde.
Murray, Madget, Cromwell.
Neilson, S., Miller's Flat.
Nicholson, W. E., Alexandra.
O'Leary, D., Waiau.
Olsen, Chas., Roxburgh.
Parsons, J. D., jun., Clyde.
Percy, John, Clyde.
Perkins, A. C., Dunedin.
Pettigrew, Geo., Nelson Creek.
Poulter, G. W., Alexandra.
Pringle, John, Miller's Flat.
Ray, J. C., Totara Flat.
Reeder, Philip, Bald Hill Flat.
Rennie, Andrew, Roxburgh.
Ross, Alexander, Cromwell.
Ross, Robert, Alexandra.
Richmond, J., Gibbston.
Ritchie, J. S., Waitiri.
Sanders, H. P., Clyde.
Sanders, John, Cromwell.
Sanders, Thos., Alexandra.
Schaumann, H., Alexandra.
Scott, M. G., Alexandra.
Scott, Robert, Capleston.
Shore, T. M., Queenstown.
Shore, Wm., Gore.
Simonsen, Chas., Alexandra.
Skilton, A. G., Old Diggings.
Sligo, N. K., Ahaura.
Smeaton, S. H., Inangahua Junction.
Smith, Alfred, Inangahua Junction.
Steel, Archibald, Kawarau Gorge.
Steel, Thos., Dunedin.
Templeton, Ivie, Rongahere.
Thompson, J., Alexandra.
Thompson, T., Miller's Flat.
Toohey, J. M., Alexandra.
Tough, John, Miller's Flat.
Troy, G. C., Cromwell.
Turnbull, W. D., Canvastown.
Tyson, John, Rongahere.
Von Haast, J. H., Clyde.
Wallace, John A., Miller's Flat.
Watt, John, Cromwell.
Weaver, Chas., Alexandra.
Williamson, R., Millar's Flat.
Williamson, Walter, Miller's Flat.
Wilson, S. W., Waikaka Valley.
Wood, R. M., Cromwell.
Woodhouse, W. S., Roxburgh.
Young, Andrew, jun., Roxburgh.

Dredgemasters' Certificates, after Examination, issued under "The Mining Act, 1898," and Amendment Acts, 1901 and 1903.

Anderson, G. B., Roxburgh.
Baird, William G., Clyde.
Bardsley, John James, Cromwell.
Blair, G., Abbotsford.
Borthwick, Robert, Alexandra.
Bourke, John, Clyde.
Brent, C. D., Cromwell.
Briggans, Thomas, Alexandra.
Briggans, William, Alexandra.
Broderick, T., Lyell.
Bruce, J. A., Kawarau Gorge.
Burley, J. P., Westport.
Burton, A. P., Miller's Flat.
Callaghan, E., Three-channel Flat.
Carnegy, A., Three-channel Flat.
Carter, W. W., Sandy Point.
Clark, D., Callaghan's Creek.
Coup, George, Albertown.
Cox, R. D., Alexandra.
Craig, D. A., Shag Point.
Croswell, James, Three-channel Flat.
Curno, C. B., Alexandra.
Dalton, J. R., Three-channel Flat.
Donaldson, John, Lawrence.
Downie, Henry, Totara Flat.
Eaton, Edgar W., Alexandra.
Elder, D. D., Roxburgh.
Forno, D., Inangahua Junction.
French, T. E. K., Three-channel Flat.
Gibson, William H., Cromwell.
Gillooly, T., Roxburgh.
Gillstrom, Carl A., Berlin's.
Gunn, W. E., Beaumont.
Guyton, James, Dunedin.
Hanning, C. J., Clyde.
Hansen, H. C., Three-channel Flat.
Harden, J., Stafford.
Harliwick, Matthew, Roxburgh.
Hewetson, Sydney, Nelson Creek.
Hogg, J., Nevis.
Holden, John, Cromwell.
Hopburn, D. O., Alexandra.
Hughes, John L., Miller's Flat.
Johnston, John, Maori Gully.
Johnston, Louis, Beaumont.
Jones, T. R., Miller's Flat.
Junker, Frank J., Berlin's.
Kane, William, Clyde.
Kane, William, Cromwell.
Kean, F. F., Waikaka.
Kitto, John, Clyde.
Linney, William, Island Block.
Livingstone, D., Alexandra.
MacDonald, C. J., Cromwell.
MacGinnis, J. A., Cromwell.
MacGinnis, M. P., Alexandra.
MacLaren, John, Alexandra.
Marklund, C. O., Lowburn Ferry.
Matthews, A. A., Three-channel Flat.
Mayne, W. C., Nelson Creek.
McDonald, C. J., Waitere.
McDonald, G., Alexandra.
McCallum, W. S., Alexandra.
McGregor, Dougald S., Alexandra.
McKenzie, John, Roxburgh.
McLean, John, Roxburgh.
Melvin, J. R., Roxburgh.
Moffitt, R. W., Miller's Flat.
Mollison, William, Stillwater.
Monson, C. H., Miller's Flat.
Morel, A. E., Nobles.
Morel, L. H., Inangahua Junction.
Morris, V., Cromwell.
Munro, R. F., Ross.
Murray, H. B., Cromwell.
Murray, Robert John, Canvastown.
Nelson, Edgar, Brunnerton.
Nelson, George L., Brunnerton.
Olsen, Hans, Alexandra.
Omond, Thomas, Nevis.
Orkney, H. E., Cromwell.
Orr, William W., Cromwell.
Parker, P. B., Roxburgh.
Patterson, J., Clyde.
Plumb, E. H., Maori Point.
Poppelwell, William, Alexandra.
Rait, Hume, Albertown.
Ray, J. F., Bannockburn.
Reiderer, Edward, Cromwell.
Robertson, D. J., Alexandra.
Robertson, W. R., Alexandra.
Rooney, J. B., Roxburgh.
Rumble, Chas., Ngahere.
Rumble, Joseph, Miller's Flat.
Sanders, W. J., Ahaura.
Sawle, J., Cromwell.
Sawyer, J. F., Alexandra.
Taylor, Alexr., Alexandra.
Taylor, J. T., Dunedin.
Vickerman, E. M., Cromwell.
Wasserbrenner, M., Alexandra.
Wathen, James, Miller's Flat.
Watson, E. H., Collingwood.
Weir, W., Nevis.
Wescombe, Alfred L., Island Block.
Westcott, P. A., Miller's Flat.
Williams, Frederick, Alexandra.
Wilson, George, Marsden.
Wilson, Stephen L., Inangahua Junction.
Wood, W. W., Cromwell.
Woodhouse, F., Bannockburn.
Wylde, G. R., Inangahua Junction.

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STATEMENT showing the Whole of the QUARTZ-CRUSHING MACHINES and APPLIANCES for treating Auriferous and Argentiferous Ores in the HAURAKI MINING DISTRICT for the Year ended the 31st December, 1904.

[NOTE.—Under heading "Power Employed" the letter H. indicates hand, O. oil, S. steam, and W. water-power.]

Locality where Machine is situated.	Name of Machine.	Name of Owners.	Number of Rock-breakers.	Number of Stamps.	Number of Ore-crushers.	Number of Berdans.	Number of Pans.	Number of Settlers.	Number of Mortars.	Number of Retorts.	Number of Furnaces for Gold-melting or roasting.	Number of Furnaces for Assay Purposes.	Number of Plants for Cyanide Process.	Number of Concentrating Plants.	Power employed.
Coromandel County.															
Coromandel ..	Telephone ..	Hauraki Gold-mining Co. ..	..	15	..	6	..	..	3	3	1	..	..	1	S
" ..	Union Beach Tailing Plant	Frank Sheppard	..	..	..	1	..	1	..	1	1	..	1	..	W
" ..	Scotty's ..	.. ..	..	9	..	9	..	..	2	2	1	..	..	..	W
" ..	Prime battery ..	School of Mines Board in trust	..	5	..	3	..	..	1	1	1	..	..	..	O
Tokatea	Tokatea ..	Royal Oak of Hauraki Gold-mining Co.	1	15	..	6	..	..	2	2	1	..	..	..	W, S
"	West Tokatea ..	West Tokatea Gold-mining Co.	..	3	..	2	..	..	1	1	..	..	..	..	S
Waikoromiko ..	Four-in-hand ..	Four-in-hand Gold-mining Co.	..	10	..	2	..	..	1	1	1	1	..	..	S
Cabbage Bay ..	Vizard's ..	C. Blanch	..	4	..	1	..	..	1	1	1	..	..	..	W
" ..	Macoromic ..	Macoromic Syndicate	..	5	..	2	..	..	1	1	1	..	..	..	O
Opitonui ..	Owera ..	Kauri Freehold Gold Estates Gold-mining Co.	..	16	..	4	..	..	2	2	1	..	..	..	S
Kuaotuna ..	Try Finke ..	Kuaotuna Syndicate	..	16	..	3	..	2	2	2	1	1	1	..	S
" ..	Great Mercury ..	Thompson and others	..	10	..	1	..	1	4	2	1	1	1	..	S
" ..	Irene ..	Waitaia Gold-mining Co. ..	..	10	..	2	..	1	2	1	1	1	..	..	S
" ..	Handsworth ..	Louis Woodcock	..	3	..	1	..	..	1	1	..	..	..	..	W
" ..	Mahakirau .	Coromandel County in trust	..	3	..	1	..	..	1	1	..	..	..	..	S
Thames County.															
Gumtown	Kapowai ..	M. O'Connor	..	8	..	3	..	..	1	1	1	..	..	..	S
"	Big Beetle ..	Big Beetle Gold-mining Co.	1	2	..	2	..	..	2	1	..	..	..	..	W
Tapu	Bullion	H. H. Adams	..	15	..	4	..	..	2	2	1	..	..	..	W
"	Mahara Royal ..	Mahara Royal Gold-mining Co.	..	20	..	18	..	..	2	2	1	..	..	1	W
Waiomo	Monowai ..	Monowai Gold-mining Co.	1	10	..	1	1	2	1	2	1	..	..	1	S, W
Puru	Puru ..	.. ..	..	10	..	2	..	..	1	1	1	..	..	..	W
Tararu	Tararu ..	A. Trower	..	30	..	6	..	3	2	1	1	1	1	..	S, W
"	New Alburnia ..	New Alburnia Gold-mining Co.	..	20	..	7	..	2	1	3	1	..	..	..	W
"	Eclipse	Eclipse Gold-mining Co.	..	10	..	3	1	..	1	2	1	..	..	..	W
"	Chicago	.. ..	..	10	..	2	1	..	1	1	..	..	..	..	W
Karaka	Claremont ..	George Bryant	..	1	..	1	..	..	1	1	..	..	..	..	..
"	Junction ..	McGregor and Taylor	..	5	..	1	..	..	1	1	..	..	..	..	..
Hape	Fortuna ..	H. H. Adams	..	5	..	2	..	..	1	1	1	..	..	..	W
Kirikiri	Kirikiri ..	.. ..	..	4	..	2	..	..	1	1	..	..	..	..	S
Puriri	Puriri	Puriri Gold Estates	..	8	..	2	..	..	1	1	1	..	..	..	W
"	Hit or Miss ..	J. McInnis and party	..	6	..	2	..	..	1	1	1	..	..	..	S, W
Tairua	Broken Hill ..	Broken Hill Gold-mining Co.	1	20	..	6	..	..	1	1	1	1	1	..	S, W
"	Chelmsford ..	Chelmsford Gold-mining Co.	1	10	..	2	..	..	1	1	1	1	1	..	W
"	Taniwha ..	Taniwha Gold-mining Co.	..	3	..	1	..	..	1	1	1	..	..	..	O
Whangamata ..	Mananu ..	Mananu Gold-mining Co.	1	20	..	1	..	..	1	1	1	1	1	..	S, W
Ohui	Waihui ..	Waihui Gold-mining Co.	..	2	..	1	..	..	1	1	..	..	..	..	W
Omahu	Sheet Anchor ..	Tillsley Bros.	..	2	..	1	..	..	1	1	1	..	..	..	S
"	Klondyke ..	Klondyke Gold-mining Co.	..	5	..	2	..	..	1	1	..	..	..	..	W
Thames Borough.															
Thames Borough ..	Kuranui ..	Kuranui Gold-mining Co.	..	20	..	6	..	..	2	2	1	..	..	..	W
" ..	Moanataiari ..	A. and G. Price ..	..	60	..	21	4	..	2	6	1	1	1	1	S, W
" ..	Comer's ..	Kuranui-Caledonian Gold-mining Co.	..	20	..	5	..	..	2	2	1	..	..	..	W
" ..	Judd's	Charles Judd	..	..	..	2	9	..	..	..	1	..	..	..	W
" ..	May Queen ..	May Queen Syndicate ..	..	33	..	8	3	..	2	3	2	..	..	..	W
" ..	Waiotahi ..	Waiotahi Gold-mining Co.	..	21	..	5	..	..	2	2	1	..	..	..	S
" ..	Fame and Fortune	Fame and Fortune Gold-mining Co.	..	21	..	16	..	..	2	2	1	..	..	..	W
" ..	School of Mines ..	School of Mines Board in trust	1	2	..	1	1	1	3	3	1	4	1	..	W
" ..	May Queen Extended	May Queen Extended Gold-mining Co.	..	23	..	14	..	..	2	4	1	..	..	..	W
" ..	Fairmile ..	T. Manning	..	..	..	1	..	..	1	1	1	..	..	..	W
" ..	Bank of New Zealand	Bank of New Zealand ..	..	..	..	..	..	..	2	2	1	1	..	..	)
" ..	Bank of New South Wales	Bank of New South Wales	..	..	..	..	..	..	2	2	1	1	..	..	H

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STATEMENT showing the Whole of the QUARTZ-CRUSHING MACHINES and APPLIANCES for treating Auriferous and Argentiferous Ores in the HAURAKI MINING DISTRICT for the Year ended the 31st December, 1904—*continued*.

Locality where Machine is situated.	Name of Machine.	Name of Owners.	Number of Rock-breakers.	Number of Stamps.	Number of Ore-crushers.	Number of Berdans.	Number of Pans.	Number of Settlers.	Number of Mortars.	Number of Retorts.	Number of Furnaces for Gold melting or retorting.	Number of Furnaces for Assay Purposes.	Number of Plants for Cyanide Process.	Number of Concentrating Plants.	Power employed.
Ohinemuri County.															
Paeroa	Bank of New Zealand	Bank of New Zealand ..	1	..	..	..	..	..	2	1	1	1	..	..	H
Karangahake ..	Crown	New Zealand Crown Mines (Ltd.)	2	60	..	4	..	..	2	2	1	1	1	..	S, W
" ..	Woodstock	Talisman Consolidated Gold-mining Co. (Ltd.)	2	40	..	2	..	..	2	2	1	1	1	1	S, W
" ..	Talisman		4	60	..	5	..	..	3	3	1	1	1	1	S, W
Komata	Komata Reefs ..	Komata Reefs Gold-mining Co.	2	20	..	4	..	..	2	2	1	1	1	1	S, W
Waitekauri ..	Waitekauri ..	Waitekauri Gold-mining Co.	2	40	1	6	..	..	3	2	1	1	1	1	S, W
" ..	Golden Cross ..	Ditto	1	10	..	2	..	..	2	2	1	1	1	..	S, W
" ..	Grace Darling ..	"	1	10	..	3	..	..	1	2	1	1	1	..	S, W
" ..	Jubilee	Jubilee Gold-mining Co.	..	10	..	5	2	1	1	2	1	1	1	..	S
Maratoto	Waitekauri Extended	Waitekauri Extended Gold-mining Co.	1	40	..	3	..	..	2	2	1	1	1	..	W
"	Maratoto ..	Maratoto Gold-mining Co.	..	10	..	2	..	..	2	1	1	1	1	..	S
"	Hikutaia Gold Syndicate	Hikutaia Gold Syndicate	1	5	..	2	..	..	1	2	1	1	..	..	S
Waihi	Waihi Gold Reefs Syndicate (Gladstone)	Waihi Gold Reefs Syndicate (Gladstone) ..	1	5	..	..	..	..	..	..	..	..	..	..	O
"	Waihi	Waihi Gold-mining Co. ..	2	90	..	5	..	..	3	6	1	1	1	1	S, W
"	Union-Waihi ..	" ..	2	40	..	2	..	..	2	2	1	1	1	1	S, W
Waikino	Waikino ..	" ..	4	200	..	12	..	..	3	4	1	1	1	1	S, W
Piako	Waiorongomai ..	E. H. Hardy	1	10	..	4	1	..	2	2	1	1	1	1	W
Great Barrier Island	Barrier Reefs ..	Henry Brett	1	20	..	3	..	2	3	2	1	1	1	1	S
Auckland	Bank of New Zealand	Bank of New Zealand ..	..	..	..	1	1	2	6	4	2	..	..	..	W
			35	1,220	1	262	25	20	114	123	60	32	24	13	

Tairua.—Coronation Mine: Five stamps and one berdan are in course of erection. Golden Belt: Forty head of stamps are being erected at this mine.

Waihi.—Grand Junction: Preparations are being made for the erection of forty head of stamps. These stamps were formerly at Opitonui.

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STATEMENT showing QUARTZ-CRUSHING MACHINES and APPLIANCES for treating Auriferous Ores in the MARLBOROUGH, NELSON, and WESTLAND MINING DISTRICTS for the Year ended the 31st December, 1904.

Locality where Machine is situated.	Name of Machine	Name of Owner.	Number of Rock-breakers.	Number of Stamps.	Number of Ore-crushers.	Number of Berdans.	Number of Pans.	Number of Settlers.	Number of Mortars.	Number of Retorts.	Number of Furnaces for Gold-melting or retort's.	Number of Furnaces for Assay Purposes.	Number of Plants for Cyanide Process.	Number of Plants for Chlorination.	Number of Concentrating Plants.	Power employed.
Marlborough County.																
Top Valley ..	Wellington ..	T. W. Young and P. K. Watty	..	10	..	1	..	..	..	1	..	..	..	..	..	S
" ..	Jubilee	Jubilee Gold-mining Co. (Limited)	..	10	..	..	..	..	..	..	..	..	..	..	..	W
Collingwood County.																
Taitapu	Golden Ridge ..	Taitapu Gold Estates (Limited)	2	20	..	4	..	1	1	2	1	1	..	..	..	W
"	Golden Blocks ..	Golden Blocks (Taitapu) (Limited)	..	8	..	..	..	1	1	2	..	..	..	..	..	S
Buller County.																
Mokihinui ..	Red Queen ..	Red Queen Gold-mining Co. (Limited)	..	2	..	..	..	..	..	..	..	..	..	..	..	W
Waimangaroa ..	Britannia ..	Britannia Gold-mining Co. (Limited)	..	5	..	..	..	..	..	..	..	..	..	..	..	W
" ..	Stony Creek ..	Stony Creek Gold-mining Co. (Limited)	..	10	..	2	..	..	2	2	..	..	..	..	..	W
Lyell	Alpine Extended ..	Alpine Extended Gold-mining Co. (Limited)	..	20	..	4	..	1	1	2	..	..	1	..	..	W
Inangahua County.																
Bourke's Creek ..	Gardiner's ..	W. P. Gardiner and Sons ..	..	..	..	12	..	..	1	2	..	..	..	..	..	W
Victoria Range ..	Kirwan's Reward ..	Kirwan's Reward Gold-mining Co. (Limited)	..	15	..	..	..	..	..	1	1	..	..	..	..	W
Capleston ..	Welcome	Welcome Gold-mining Co. (Limited)	..	5	..	..	..	..	..	2	1	..	1	..	..	S
Reefton	Golden Fleece ..	Consolidated Goldfields of New Zealand (Limited)	1	20	..	1	..	..	..	2	1	..	1	..	1	S
"	Wealth of Nations ..	Ditto	..	20	..	1	..	..	2	2	1	..	1	..	..	W
"	Keep-it-Dark ..	Keep-it-Dark Quartz-mining Co. (Limited)	..	20	..	4	..	1	1	2	1	1	1	..	1	W
"	Progress Mines ..	Progress Mines of New Zealand (Limited)	3	65	..	1	..	..	2	2	1	1	1	1	1	W
"	New Scotia ..	New Scotia Gold-mining Co. (Limited)	..	10	..	1	..	..	1	1	..	..	1	..	..	S
"	Golden Lead ..	Golden Lead Gold-mining Co. (Limited)	..	10	..	..	..	..	1	..	..	..	..	..	..	W
"	Last Chance ..	Alex. Fleming and party ..	..	5	..	..	..	..	1	1	..	..	..	..	..	S
"	New Inkerman ..	New Inkerman Mines (Limited)	..	20	..	8	..	..	1	1	1	1	1	..	1	S
"	Big River ..	Big River Gold-mining Co. (Limited)	..	10	..	4	..	..	2	2	1	1	1	..	..	W
"	King George ..	St. George Gold-mining Co. (Limited)	..	5	..	..	..	..	1	1	..	..	..	..	..	W
"	Inglewood ..	Inglewood Gold-mining Co. (Limited)	..	10	..	..	..	..	..	..	..	..	..	..	..	S
Grey County.																
Paparoa Ranges ..	Mount Paparoa ..	Mount Paparoa Gold-mining Co. (Limited)	..	10	..	1	..	..	1	1	..	..	..	..	..	W
Ten-mile Creek ..	Taffy	Taffy Gold-mining Co. (Limited)	..	5	..	1	..	..	..	1	..	..	..	..	..	W
			6	315	..	40	..	4	19	30	9	5	9	1	4	

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QUARTZ-CRUSHING MACHINES and APPLIANCES for treating Auriferous Ores in the SOUTHERN MINING DISTRICT for the Year ended the 31st December, 1904.

Locality where Machine is situated.	Name of Machine.	Name of Owner.	Number of Rock-breakers.	Number of Stamps.	Number of Ore-crushers.	Number of Berdans.	Number of Pans.	Number of Settlers.	Number of Mortars.	Number of Retorts.	Number of Furnaces for Gold smelting.	Number of Furnaces for Assay Purposes.	Number of Plants for Cyanide Process.	Number of Concentrating Plants.	Power employed.
Tuapeka County—															
Waipori	Otago Pioneer Quartz	Otago Pioneer Quartz (Waipori) Gold-mining Co.	1	10	..	..	..	..	..	1	1	1	..	1	S
"	Victoria	R. Cotton	..	5	..	..	..	..	..	..	..	..	..	..	W
"	Bella	Bella Gold-mining Syndicate	..	5	..	..	..	..	..	..	..	..	..	..	W
Bruce County—															
Waitahuna ..	Burnt Creek ..	Table Hill Quartz-mining Co.	..	10	..	..	..	..	..	..	..	..	..	..	W
" ..	Canada	Canada Reef Gold-mining Co.	..	10	..	..	..	..	..	..	..	..	..	..	W
" ..	Last Chance ..	Park & Co.	..	5	..	..	..	..	..	..	..	..	..	..	W
Lake County—															
Queenstown ..	Invincible ..	Invincible Gold-mining Co.	..	10	..	7	..	..	2	..	..	..	1	1	W
Macetown	Premier	Premier Sunrise (N.Z.) Gold-mining Co.	1	20	..	2	..	1	4	1	1	1	1	..	W
"	Tipperary ..	Indian Glenrock (Wynaad) Gold-mining Co.	..	10	..	1	..	1	..	1	1	1	1	..	W
Skipper's	Shotover ..	Shotover Quarts-mining Co.	..	10	..	..	..	..	..	..	..	..	..	..	W
Bullendale ..	Achilles	Achilles Gold-mines ..	1	30	..	..	..	..	6	1	1	1	..	..	W
Bannockburn ..	Day Dawn ..	Lawrence Bros. ..	..	4	..	1	..	..	1	..	..	..	..	..	W
" ..	Carrick	James Lawrence ..	..	10	..	..	..	..	2	..	..	..	..	..	W
" ..	Star of the East ..	Lawrence Bros. ..	..	10	..	..	..	..	..	..	..	..	..	..	W
Bendigo	Bendigo ..	Cromwell Proprietary Gold-mining Co.	..	20	..	4	..	..	4	1	1	1	..	..	S, W
"	..	Macabe and Son ..	..	2	..	..	..	..	..	..	..	..	..	..	W
"	..	Bendigo Tailings Syndicate	..	..	..	..	..	..	..	..	1	1	..	..	..
"	Alta	Alta Gold-mining Co. ..	..	4	..	..	..	..	1	..	..	..	..	..	O
Fiord County—															
Te Oneroa ..	New Star ..	New Star Gold-mining Co.	..	10	..	14	..	..	..	..	..	..	..	..	S
" ..	Alpha Dawn ..	Alpha Dawn Gold-mining Co.	..	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Golden Site ..	Golden Site Gold-mining Co.	..	10	..	4	..	..	..	..	..	..	..	..	W
Vincent County—															
Bald Hill Flat ..	Excelsior ..	Gray and Holden ..	..	3	..	..	..	..	1	1	1	..	..	..	W
" ..	White's Reef ..	R. T. Symes	..	5	..	1	..	..	1	1	1	..	..	..	W
Maniototo County—															
Hyde	Mount Highlay ..	Mount Highlay Gold-mining Co.	..	12	..	..	..	..	..	..	..	..	..	..	W
Rough Ridge ..	Great Eastern ..	F. H. Perry	..	5	..	..	1	..	1	1	1	..	..	..	W
Waihemo County—															
Macrae's	Maritana ..	C. McGill	..	6	..	..	..	..	..	..	..	..	..	1	O
"	Ounce	Ounce Gold-mining Co. ..	..	8	..	..	..	..	..	..	..	..	..	..	W
"	Bonanza ..	L. O. Beal, jun. ..	1	5	1	..	1	..	1	1	1	..	..	..	W
"	Mills's United ..	H. N. Mills and Son ..	..	5	..	1	..	..	1	1	1	..	..	..	S
"	Golden Point ..	W. and G. Donaldson ..	1	10	1	1	2	..	1	1	..	1	..	2	S, W
Stoneburn ..	Golden Bar ..	Golden Bar Gold-mining Co.	..	10	..	..	..	..	1	1	1	..	1	..	S
" ..	Gilivern	A. G. Davies	..	5	..	..	..	..	1	1	..	..	..	..	S
Taieri County—															
Hindon	Parker's	A. Parker	..	4	..	..	..	..	1	..	..	..	..	..	O
Barewood	Barewood ..	Barewood Gold-mining Co.	..	10	..	..	..	..	1	1	..	..	1	1	O
			5	283	2	36	4	2	30	14	12	7	5	6	..

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STATEMENT showing the QUANTITY of QUARTZ CRUSHED and GOLD OBTAINED in the HAURAKI MINING DISTRICT for the Year ended the 31st December, 1904.

Locality and Name of Mine.	Average Number of Men employed.	Quartz crushed.	Gold obtained.		Estimated Value.
			Amalgamation.	Cyanide.	
GREAT BARRIER ISLAND.					
Barrier Reefs	2	Tons cwt. qr. lb. 3,119 tailings	Oz. dwt. ..	Oz. dwt. 10,646 18	£ s. d. 2,370 18 2
COROMANDEL COUNTY.					
Cabbage Bay—					
White Star	2	1 5 0 0	27 0	..	75 5 3
Waikoromiko—					
Four-in-Hand	10	253 12 0 14	340 13	..	989 8 6
Tokatea—					
Royal Oak	46	1,027 5 1 22	3,339 17	..	9,110 1 7
West Tokatea	10	27 1 2 8	166 13	..	470 17 3
Harbour View	9	0 10 0 0	6 12	..	17 0 0
Monte Christo	9	0 5 0 0	8 5	..	25 7 9
	74	1,055 2 0 2	3,521 7	..	9,623 6 7
Kapanga—					
Kapanga	2	115 0 0 17	66 1	..	158 10 4
Golden Spark	2	7 0 0 15	60 5	..	160 15 0
Hero and Little Hero Extended ..	2	8 0 0 0	8 10	..	25 10 0
	6	130 0 1 4	134 16	..	344 15 4
Union Beach Tailing Plant ..	3	1,525 tailings	..	346 1	701 4 8
Hauraki Block—					
Old Hauraki	20	171 0 0 0	315 9	..	953 8 3
Bunker's Hill	10	33 0 3 26	189 5	..	581 1 6
Hauraki Freeholds	14	103 2 3 6	922 17	..	2,698 5 9
Success	2	147 0 0 18	84 5	..	202 4 4
Golden Pah	4	38 5 0 26	184 14	..	554 2 0
	50	492 9 0 20	1,696 10	..	4,989 1 10
Tiki—					
Vaughan's	2	1 0 0 5	11 9	..	31 9 9
Kennedy Bay—					
Old Whangapoua	2	1 0 1 12	63 4	..	173 16 0
Exalt	2	1 5 3 16	20 17	..	57 6 9
	4	2 6 1 0	84 1	..	231 2 9
Kuaotunu—					
Waitaia	21	1,119 0 0 0	2,033 1	..	6,063 10 9
Otama	3	111 0 0 0	167 19	..	410 12 9
	24	1,230 0 0 0	2,201 0	..	6,474 3 6
Sundries	10	511 10 2 20	531 1	..	491 13 1
Totals	185	5,202 5 2 9	8,547 17	346 1	23,951 11 3
THAMES COUNTY AND BOROUGH.					
Tapu—					
Mahara-Royal	10	1,874 0 0 0	585 7	..	1,785 6 7
Sheridan	2	16 0 0 0	38 0	..	115 12 11
	12	1,890 0 0 0	623 7	..	1,900 19 6
Tararu—					
Eclipse	8	133 0 0 0	300 0	..	867 10 0
Kurunui—					
Kurunui Gold-mining Company ..	6	34 0 0 0	36 13	..	101 12 8
Moanataiari—					
Moanataiari	15	582 0 0 0	407 12	..	1,118 12 10
Alburnia	20	721 0 0 0	784 9	..	2,108 13 3
Kuranui-Caledonian	43	750 10 0 0	1,610 10	..	4,345 4 9
Little Mabel	3	32 0 0 0	72 6	..	172 1 0
	81	2,085 10 0 0	2,874 17	..	7,744 10 10

* Tailings.

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STATEMENT showing the QUANTITY of QUARTZ CRUSHED and GOLD OBTAINED in the HAURAKI MINING DISTRICT for the Year ended the 31st December, 1904—*continued*.

Locality and Name of Mine.	Average Number of Men employed.	Quartz crushed.	Gold obtained.		Estimated Value.
			Amalgamation.	Cyanide.	
THAMES COUNTY AND BOROUGH—*continued*					
Waiotahi—		Tons cwt. qr. lb.	Oz. dwt.	Oz. dwt.	£ s. d.
Waiotahi Company	12	335 0 0 0	1,236 13	..	3,364 5 4
Fame and Fortune	11	51 0 0 0	90 16	..	255 12 4
Nonpareil	9	155 0 0 0	232 17	..	645 10 3
Golden Drop	2	4 0 0 0	46 16	..	122 13 5
Ballarat	3	52 0 0 0	107 12	..	333 11 10
	37	597 0 0 0	1,714 14	..	4,721 13 2
Grahamstown—					
Victoria	9	174 0 0 0	117 7	..	311 17 0
New Saxon	8	221 0 0 0	138 7	..	370 13 0
Judd's	4	6,400 tailings	761 19	..	1,947 19 6
	21	6,795 0 0 0	1,017 18	..	2,630 9 6
Karaka—					
May Queen Extended	7	166 0 0 0	97 10	..	268 3 0
New Una	5	25 0 1 22	89 4	..	224 2 6
Claremont	1	0 0 1 22	29 12	..	79 18 0
	13	191 0 3 16	216 6	..	572 3 6
Hape Creek—					
Thames Star	1	0 0 1 8	27 4	..	83 0 0
Otanui—					
Otanui Mascotte	4	1 10 0 21	12 0	..	32 7 5
Omahu—					
Klondyke	2	120 0 0 0	18 5	..	40 9 2
Gumtown—					
Kapowai	12	530 0 0 0	513 0	..	1,174 1 10
Big Beetle	5	203 0 0 0	280 16	..	715 17 10
	17	733 0 0 0	793 16	..	1,889 19 8
Tairua—					
Tairua Broken Hills	50	3,700 0 0 0	2,186 0	4,542 4	10,287 1 10
Chelmsford	6	180 0 0 0	44 7	117 8	249 7 5
	56	3,880 0 0 0	2,230 7	4,659 12	10,536 9 3
Whangamata—					
Waimangu	2	1 0 0 0	..	..	82 13 3
Sundries	18	271 14 0 5	826 14	..	1,271 2 11
Totals for Thames County and Borough	276	16,731 15 1 22	10,691 16	4,659 12	32,392 7 7
WAIHI BOROUGH.					
Waihi	1,236	259,978 0 0 0	..	778,135 2	599,654 10 4
				149,915 0	53,835 16 8*
		36,760 0 0 0	..	..	18,068 2 5†
		39 10 0 0	..	..	1,542 18 11‡
					673,101 8 4
Waihi Gladstone	8	300 tailings	..	395 8	172 8 11
Ohinemuri River Syndicate ..	10	3,433 "	..	2,114 13	884 1 3
Totals for Waihi Borough ..	1,254	300,510 10 0 0	..	930,560 3	674,157 18 6
OHINEMURI COUNTY.					
Waitekauri—					
Waitekauri G.-M. Co. (Ltd.) ..	30	1,652 0 0 0	2,813 15	175 5	4,612 18 1
Karangahake—					
Talisman	225	44,888 0 0 0	80,551 0	133,428 7	84,826 10 6
New Zealand Crown	204	26,603 0 0 0	..	21,754 4	37,997 3 7
Komata—					
Komata Reefs	100	15,800 0 0 0	6,659 6	37,799 16	32,559 17 3
Hikutaia—					
Marototo	1	100 0 0 0	..	385 0	90 0 2
	530	87,391 0 0 0	87,210 6	193,367 7	155,473 11 6
Totals for Ohinemuri County	560	89,043 0 0 0	90,024 1	193,542 12	160,086 9 7

* Concentrates plant, Victoria Mill. † Assay value concentrates shipped ‡ Slag tailings shipped.

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STATEMENT showing the QUANTITY of QUARTZ CRUSHED and GOLD OBTAINED in the HAURAKI MINING DISTRICT for the Year ended the 31st December, 1904—*continued*.

Locality and Name of Mine.	Average Number of Men employed.	Quartz crushed.	Gold obtained.		Estimated Value.
			Amalgamation.	Cyanide.	
PIAKO COUNTY.					
Waiorongomai—		Tons cwt. qr. lb.	Oz. dwt.	Oz. dwt	£ s. d.
Hardy's Mines (Limited)	28	483 0 0 0	281 5	..	665 10 3
GREAT BARRIER ISLAND.					
Great Barrier—					
Barrier Reefs	2	3,119 tailings	..	10,646 18	2,380 18 2
SUMMARY.					
Great Barrier	2	3,119 0 0 0	..	10,646 18	2,380 18 2
Coromandel County	185	5,202 5 2 9	8,547 17	346 1	23,951 11 3
Thames County and Borough ..	276	16,731 15 1 22	10,691 16	4,659 12	32,392 7 7
Waihi Borough	1,254	300,510 10 0 0	..	930,560 3	674,157 18 6
Ohinemuri County	560	89,043 0 0 0	90,024 1	193,542 12	160,086 9 7
Piako County	28	483 0 0 0	281 5	..	665 10 3
Grand totals, 1904 ..	2,305	415,089 11 0 3	109,544 19	1,139,755 6	893,634 15 4
" 1903 ..	2,321	316,114 12 0 20	134,598 9	872,639 2	917,867 4 10
Increase ..	..	98,974 18 3 11	25,053 10	267,116 4	..
Decrease ..	16	..	..	..	24,232 7 6

Number of men employed on development-work and prospecting in the whole district from which no returns of gold have been obtained: 173.

BATTERY RETURNS from QUARTZ-MINES in the MARLBOROUGH, NELSON, and WEST COAST MINING DISTRICTS for the Year ended the 31st December, 1904.

Name and Locality of Mine.	Quartz crushed.	Yield of Gold.	Approximate Total Values.
Collingwood District—	Tons.	Oz. dwt. gr.	£ s. d.
Golden Ridge, Taitapu	646	791 7 10	3,069 1 5
Golden Blocks, Taitapu	2,411	2,222 12 0	8,764 12 9
Westport District—			
Lady Agnes, Seddonville	80	11 0 22	43 12 9
Britannia, Waimangaroa	765	635 12 13	2,506 15 10
Lyell District—			
Alpine Extended, Lyell	4,855	1,605 0 13	5,769 11 7
Reefton District—			
Welcome, Capleston	380	296 12 6	1,027 13 1
Kirwan's Reward, Capleston	6,250	1,949 15 0	7,764 16 7
Golden Fleece, Black's Point	12,930	6,094 18 3	24,052 4 11
Wealth of Nations, Crushington	12,478	5,153 8 2	20,608 1 9
Keep-it-Dark, Crushington	12,300	5,514 15 18	20,668 9 9
Progress, Waitahu Survey District	59,908	27,335 0 18	108,337 1 3
New Inkerman, Waitahu Survey District ..	8,139	2,623 10 7	10,076 8 3
Last Chance, Merrijigs	20	55 0 0	220 0 0
United, Merrijigs	118	83 2 12	308 6 10
New Scotia, Merrijigs	479	189 7 20	524 7 2
Big River, Merrijigs	988	902 6 0	3,652 11 4
Inglewood, Murray Creek	3,390	1,956 6 17	7,232 12 11
Totals	126,137	57,359 16 17	224,626 8 2

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RETURNS from QUARTZ-MINES for the Year ended the 31st December, 1904.

Name and Locality of Mine.	Ordinary Quartz crushed.	Amalgam.	Melted Gold.	Value.	Tailings treated.	Gold from Tailings.	Value.
	Tons cwt. qr.	Oz. dwt. gr.	Oz. dwt. gr.	£ s. d.	Tons Cwt.	Oz. dwt. gr.	£ s. d.
Premier Sunrise (No Liability), Macetown	1,568 0 0	1,367 0 0	..	2,589 8 10	48 0	135 7 0	447 0 0
Glenrock Consolidated (Wynaad), Macetown	103 0 0	133 10 0	53 10 9	212 17 0	..	..	..
Shotover, Skipper's	1,869 0 0	1,884 0 0	597 9 9	2,334 19 0	78 10	32 7 5	124 6 0
Morning Star, Preservation Inlet ..	..	..	..	..	..	..	..
Star of the East, Bannockburn (Lawrence Bros.)	100 0 0	150 0 0	..	186 0 0	..	..	..
Bendigo, Bendigo (Tributers) ..	219 0 0	250 0 0	..	435 18 6	..	..	..
*White's Reef, Bald Hill Flat (R. T. Symes)	55 0 0	105 0 0	..	146 6 0	..	..	..
*Excelsior, Bald Hill Flat (Holden and Gray)	39 0 0	77 0 0	..	124 12 5	..	..	..
*Rough Ridge, Rough Ridge (F. H. Perry)	..	..	..	..	..	..	..
*Bonanza, Macraes (L. O. Beal, Jr.)	..	..	..	..	..	..	..
*Golden Quarry, Macraes (H. N. Mills)	..	..	..	..	..	..	..
*Golden Point, Macraes (W. and G. Donaldson)	2,150 0 0	1,275 0 0	355 7 17	1,385 17 3	..	..	..
*Ounce, Macraes (Spiers and Ross) ..	..	..	..	..	..	..	..
*Maritana, Macraes (C. McGill) ..	250 0 0	..	..	56 5 0	..	..	..
*Golden Bar, Stoneburn (J. H. Cunningham	2,142 0 0	2,432 0 0	..	3,068 12 0	..	..	..
*Gilivern, Stoneburn (A. G. Davies)	453 0 0	..	..	311 6 0	..	..	..
O.P.Q., Waipori	..	..	..	..	..	..	..
Barewood, Barewood	2,209 0 0	2,911 0 0	..	3,370 6 7	18 2	87 12 0	107 10 6
Last Chance, Canada Reefs (T. Park and Co.	226 10 0	..	..	1,097 10 0	..	..	..
Scheelite	21 0 0	..	..	..	..	..	..
Totals	11,404 10 0	10,584 10 0	1,006 7 11	15,319 18 7	139 12	255 6 5	678 16 6

Tailings at Premier Sunrise and Shotover Quartz-mines are treated by cyanide, and the tailings at Barewood as treated in New South Wales. * Privately owned mines, and owners desire returns to be included under the heading of "Sundries."

STATEMENT of VALUE of GOLD WON from QUARTZ CRUSHED for ALL DISTRICTS for the Years ended the 31st December, 1903 and 1904.

Mining District.	Year ended the 31st December, 1903.	Year ended the 31st December, 1904.
	£	£
Hauraki	917,867	893,635
Marlborough, Nelson, and West Coast ...	220,276	224,626
Otago and Southland...	21,363	15,998
Totals	1,159,506	1,134,259

GROSS TOTALS and VALUE of GOLD PURCHASED by BANKS for Year ended the 31st December, 1904

Bank.	Gold purchased.	Value.
Hauraki Mining District.		
	Oz. dwt. gr.	£ s. d.
Bank of New Zealand	13,639 1 0	44,355 6 5
Bank of New South Wales	9,547 10 0	18,341 8 8
Totals	23,186 11 0	62,696 15 1
Marlborough, Nelson, and Westland Mining Districts.		
Bank of New Zealand	35,076 14 15	137,292 15 7
National Bank of New Zealand	36,605 16 13	142,176 8 6
Bank of New South Wales	11,563 18 0	45,440 11 3
Union Bank of Australasia	2,498 0 0	9,898 0 0
Totals	85,744 9 4	334,807 15 4

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GROSS TOTALS and VALUE of GOLD PURCHASED by BANKS for Year ended the 31st December, 1904—*continued*.

Bank.	Gold purchased.	Value.
Otago and Southland Districts.		
	Oz. dwt. gr.	£ s. d.
Bank of New Zealand	109,392 1 22	420,464 1 4
Bank of New South Wales	10,953 13 15	42,444 19 5
National Bank of New Zealand	39,436 8 8	152,843 9 11
Bank of Australasia	15,931 1 0	60,964 0 0
Union Bank of Australasia	2,931 7 14	10,998 7 10
Private buyers	2,733 8 4	10,701 4 8
Totals	181,378 0 15	698,416 3 2
Grand totals	290,309 0 19	1,095,920 13 7

SUMMARY OF WORKS CONSTRUCTED.

The following statement shows the whole of the different classes of works constructed by the Department, either by direct grants or by subsidies to local bodies, during the last twenty-three years (the votes for this purpose having been under the control of the Hon. the Minister of Mines), for the purpose of opening up the mineral belts throughout the colony, and also for the development of the mining industry:—

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
UP TO YEARS 1882–83 AND 1883–84.	£ s. d.	£ s. d.	£ s. d.
Water-races	29,252 1 11	14,853 9 5	14,398 11 6
Roads on goldfields	21,437 11 2	13,089 16 0	8,347 15 2
Roads and tracks undertaken by County Councils, subsidised by Mines Department	52,841 17 0	21,844 16 7	10,207 15 9
Works undertaken by prospecting associations, subsidised by Mines Department	13,216 13 4	3,350 0 0	3,400 0 0
Construction of drainage and sludge channels, subsidised by Mines Department	5,750 0 0	2,468 15 4	781 4 8
	122,498 3 5	55,606 17 4	37,135 7 1
1884–85.			
Water-races	4,846 1 9	14,596 2 9	4,648 11 6
Roads on goldfields	18,667 10 1	9,630 9 6	12,384 15 9
Roads and tracks undertaken by County Councils, subsidised by Mines Department	13,566 14 1	6,293 16 6	12,739 17 6
Roads to mines, other than gold, subsidised by Mines Department	4,594 10 0	111 19 0	2,888 1 0
Works undertaken by prospecting associations, subsidised by Mines Department	850 0 0	108 0 0	3,692 0 0
Construction of drainage and sludge channels, subsidised by Mines Department	4,050 0 0	1,050 0 0	1,981 4 8
Diamond and other drills	3,600 0 0	1,858 0 0	..
	45,174 15 11	33,648 7 9	38,284 10 5
1885–86.			
Water-races	3,660 4 9	6,068 2 3	6,964 4 4
Roads on goldfields	27,543 18 8	12,360 14 9	27,567 19 8
Roads undertaken by County Councils, subsidised by Mines Department	14,773 2 3	13,043 15 9	12,477 9 2
Roads to mines, other than gold, subsidised by Mines Department	1,551 19 10	4,327 0 10	490 12 8
Works undertaken by prospecting associations, subsidised by Mines Department	11,860 18 0	1,999 5 7	6,389 5 9
Construction of drainage and sludge channels, subsidised by Mines Department	10,051 14 9	3,994 16 6	6,995 9 9
Schools of Mines	2,160 9 7	1,260 9 7	900 0 0
	71,602 7 10	43,049 5 3	61,785 1 4
1886–87.			
Water-races	..	1,928 14 4	3,466 0 8
Roads on goldfields	12,453 3 5	22,229 16 1	17,791 7 0
Roads and tracks undertaken by County Councils, subsidised by Mines Department	12,613 4 8	7,415 19 6	10,455 1 5
Roads to mines, other than gold, subsidised by Mines Department	..	306 1 0	110 13 1
Works undertaken by prospecting associations and companies, subsidised by Mines Department	15,671 19 6	4,521 7 3	4,618 4 7
Construction of drainage and sludge channels, subsidised by Mines Department	5,549 14 6	6,207 18 0	672 6 10
Diamond and other drills	422 15 6	422 15 6	..
Schools of Mines	3,183 7 1	3,383 7 1	700 0 0
	49,894 4 8	46,415 18 9	37,813 13 7

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SUMMARY OF WORKS CONSTRUCTED—*continued.*

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
1887–88.	£ s. d.	£ s. d.	£ s. d.
Water-races	6 6 6	6 6 6	..
Roads on goldfields	6,860 4 3	17,281 11 3	7,370 0 0
Roads and tracks undertaken by County Councils, subsidised by Mines Department	2,998 15 0	8,012 5 2	3,942 4 2
Roads to mines, other than gold, subsidised by Mines Department	..	14 5 4	..
Works undertaken by prospecting associations and companies, subsidised by Mines Department	6,456 8 0	2,703 19 3	924 8 0
Construction of drainage and sludge channels, subsidised by Mines Department	..	1,110 4 11	2,054 10 6
Schools of Mines	1,859 3 7	2,221 19 4	337 4 3
Aids to treatment of ores	1,200 0 0	390 18 3	209 1 9
	19,380 17 4	31,741 10 0	14,837 8 8
1888–89.			
Roads on goldfields	10,253 5 3	4,304 3 9	13,218 11 6
Roads and tracks undertaken by County Councils, subsidised by Mines Department	7,318 1 0	2,466 16 8	5,195 6 1
Works undertaken by prospecting associations and companies, subsidised by Mines Department	474 0 0	236 0 0	687 8 0
Construction of drainage and sludge channels, subsidised by Mines Department	..	54 10 6	..
Wharves, contributions by Mines Department	589 19 5	96 6 0	348 13 5
Aids to treatment of ores, subsidised	..	209 1 9	..
Schools of Mines	895 16 10	1,188 6 10	44 14 3
	19,531 2 6	8,555 5 6	19,489 13 3
1889–90.			
Roads on goldfields	3,834 9 7	9,148 5 9	8,005 5 4
Roads and tracks undertaken by County Councils, subsidised by Mines Department	8,507 15 8	3,451 17 11	5,928 1 3
Works undertaken by prospecting associations and companies, subsidised by Mines Department	..	..	668 0 0
Water-races	2,200 0 0	719 0 0	681 0 0
Wharves	..	150 0 0	193 13 5
Schools of Mines	1,040 0 8	1,034 0 11	50 14 0
Aids to treatment of ores	142 8 9	142 8 9	..
Tracks to open up mineral lands	1,000 0 0	207 3 6	792 16 6
Diamond drills	425 14 5	425 14 5	..
	17,150 9 1	15,278 11 3	16,314 10 6
1890–91.			
Roads on goldfields	8,811 14 4	10,815 14 8	5,201 5 0
Roads and tracks undertaken by County Councils, subsidised by Mines Department	2,703 5 0	2,252 5 5	5,027 8 4
Works undertaken by prospecting associations and companies, subsidised by Mines Department	..	..	668 0 0
Water-races	5,542 19 8	6,234 4 6	..
Wharves	..	89 9 9	..
Schools of Mines	3,847 10 0	3,898 4 0	..
Tracks to open up mineral lands	..	78 4 7	419 19 5
	20,905 9 0	23,318 2 11	11,311 12 9
1891–92.			
Roads on goldfields	14,226 5 1	8,460 0 3	11,767 9 10
Roads and tracks undertaken by County Councils, subsidised by Mines Department	3,162 0 0	1,720 18 6	4,937 10 2
Works undertaken by prospecting associations and companies, subsidised by Mines Department	1,455 5 5	336 15 9	1,668 0 0
Water-races	2,256 13 6	2,256 13 6	..
Wharves	..	..	..
Schools of Mines	1,370 19 9	1,370 19 9	..
Tracks to open up mineral lands	40 0 0	41 16 0	418 3 7
	22,511 3 9	14,187 3 9	18,786 3 7
1892–93.			
Roads on goldfields	15,199 2 4	17,325 10 0	9,628 6 10
Roads and tracks undertaken by County Councils, subsidised by Mines Department	550 0 0	1,033 0 0	4,831 9 10
Works undertaken by prospecting associations and companies, subsidised by Mines Department	970 4 9	865 4 3	1,768 0 6
Water-races	3,811 1 10	3,811 1 10	..
Wharves	..	..	..
Schools of Mines	1,232 4 4	1,232 4 4	..
Tracks to open up mineral lands	..	..	419 19 5
Artesian-well boring, Maniototo Plains	550 0 0	281 3 6	268 16 6
	22,312 18 3	24,548 3 11	16,916 18 1

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SUMMARY OF WORKS CONSTRUCTED—*continued.*

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
1893–94.	£ s. d.	£ s. d.	£ s. d.
Roads on goldfields	18,418 19 2	15,056 0 11	13,013 18 5
Roads and tracks undertaken by County Councils, subsidised by Mines Department	5,038 11 6	2,718 17 8	5,576 10 7
Works undertaken by prospecting associations and companies, subsidised by Mines Department	2,245 19 4	1,709 18 5	1,027 7 11
Water-races	5,271 17 1	5,271 17 1	900 0 0
Drainage-channels	..	..	1,000 0 0
Wharves	..	..	..
Schools of Mines	1,555 19 9	1,555 19 9	..
Tracks to open up mineral lands	..	..	..
Repairing flood-damages	500 0 0	500 0 0	..
Artesian-well boring, Maniototo Plains	800 0 0	518 16 6	..
	33,831 6 10	27,331 10 4	21,517 16 11
1894–95.			
Roads on goldfields	20,908 13 7	15,160 3 5	18,752 10 7
Roads and tracks undertaken by County Councils, subsidised by Mines Department	685 18 4	2,295 9 2	1,934 5 7
Works undertaken by prospecting associations and companies, subsidised by Mines Department	10,805 15 4	2,378 13 2	3,006 13 0
Water-races	4,801 19 7	2,427 10 11	2,151 18 8
Drainage-channels	1,521 0 0	673 14 10	3,647 5 2
Wharves	..	..	..
Schools of Mines	999 8 6	999 8 6	..
Tracks to open up mineral lands	..	..	..
Repairing flood-damages	..	..	..
Artesian-well boring, Maniototo Plains	505 19 11	505 19 11	..
Diamond drills	..	..	..
	40,228 15 3	24,440 19 11	29,492 13 0
1895–96.			
Roads on goldfields	14,554 0 7	19,970 6 6	14,086 4 8
Roads and tracks undertaken by County Councils, subsidised by Mines Department	4,614 11 1	1,607 8 6	4,290 16 11
Works undertaken by prospecting associations and companies, subsidised by Mines Department	3,477 7 0	1,726 4 8	10,093 3 0
Water-races	6,820 18 3	5,162 9 2	2,515 7 9
Drainage-channels	5,100 0 0	2,240 5 1	2,657 0 1
Wharves	..	..	..
Schools of Mines	999 3 0	999 3 0	..
Tracks to open up mineral lands	..	..	..
Repairing flood-damages	..	..	..
Artesian-well boring, Maniototo Plains	..	..	..
Diamond drills	216 1 6	216 1 6	..
	35,782 1 5	31,921 18 5	33,642 12 5
1896–97.			
Roads on goldfields	57,685 9 6	30,720 12 7	35,622 15 3
Roads and tracks undertaken by County Councils, subsidised by Mines Department	11,677 0 0	1,759 6 5	4,079 18 3
Works undertaken by prospecting associations and companies, subsidised by Mines Department	1,570 7 3	1,533 6 7	2,915 14 3
Water-races	3,090 11 1	3,927 18 0	1,678 0 10
Drainage-channels	1,409 0 0	2,149 3 11	2,516 16 2
Wharves	..	..	..
Schools of Mines	1,682 19 5	1,682 19 5	..
Tracks to open up mineral lands	..	..	..
Repairing flood-damage	..	..	..
Artesian-well boring, Maniototo Plains	..	..	..
Resumption of land	300 0 0	300 0 0	..
Prospecting deep levels	25,500 0 0	2,697 14 5	22,802 5 7
	102,915 7 3	44,771 1 4	69,615 10 4
1897–98.			
Roads on goldfields	71,318 11 7	37,410 14 3	33,907 17 4
Roads and tracks undertaken by County Councils, subsidised by Mines Department	25,151 9 8	12,158 6 7	9,677 14 0
Works undertaken by prospecting associations and companies, subsidised by Mines Department	3,939 8 1	2,357 15 1	1,581 13 0
Water-races	3,275 8 9	2,272 5 0	1,003 3 9
Drainage-channels	4,481 14 0	1,212 14 9	3,268 19 3
Schools of Mines	1,780 17 3	1,780 17 3	..
Prospecting deep levels	25,500 0 0	21,520 15 0	1,281 10 7
Water-conservation	507 3 9	507 3 9	..
Construction of telephone-lines	60 0 0	50 0 0	..
Compensation proclamation of rivers	5,196 13 10	5,196 13 10	..
	141,211 6 11	84,467 5 6	50,720 17 11

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SUMMARY OF WORKS CONSTRUCTED—*contin ed.*

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
1898–99.	£ s. d.	£ s. d.	£ s. d.
Roads on goldfields	48,201 0 2	42,358 8 6	39,825 9 0
Roads and tracks undertaken by County Councils, subsidised by Mines Department	21,025 12 0	4,191 7 9	5,914 7 5
Works undertaken by prospecting associations and companies, subsidised by Mines Department	2,936 11 8	2,143 14 1	1,103 13 1
Water-races	3,853 16 5	2,932 12 1	1,719 6 3
Drainage-channels	3,539 7 5	2,426 13 5	3,802 16 4
Schools of Mines	1,450 15 2	1,450 15 2	..
Prospecting deep levels	25,500 0 0	1,281 10 7	..
Water-conservation	12,483 13 1	7,893 19 4	..
Construction of telephone-lines	..	..	..
Compensation proclamation of rivers	676 0 8	676 0 8	..
	119,666 16 7	65,355 1 7	52,365 12 1
1899–1900.			
Roads on goldfields	46,442 15 10	44,258 2 6	42,010 2 4
Roads and tracks undertaken by County Councils, subsidised by Mines Department	4,625 0 0	2,865 7 4	5,011 0 11
Works undertaken by prospecting associations and companies, subsidised by Mines Department	2,549 7 2	1,400 9 6	1,784 3 0
Water-races	7,909 5 11	8,430 14 0	963 11 10
Drainage-channels	1,090 0 0	1,435 7 5	2,627 14 7
Schools of Mines	1,866 13 3	1,866 13 3	..
Prospecting deep levels	..	..	..
Water-conservation	6,925 10 9	6,925 10 9	..
Resumption of land	2,812 7 0	2,812 7 0	..
Compensation proclamation of rivers	811 0 0	811 0 0	..
Aid towards the treatment of ores	915 1 4	915 1 4	..
	75,947 1 3	71,720 13 1	52,396 12 8
1900–1.			
Roads on goldfields	48,835 2 1	44,757 0 1	46,088 4 4
Roads and tracks undertaken by County Councils, subsidised by Mines Department	1,495 8 2	2,882 6 2	3,133 4 10
Works undertaken by prospecting associations and companies, subsidised by Mines Department	2,353 5 10	1,266 11 7	1,033 7 9
Water-races	3,954 1 6	4,251 19 8	50 0 0
Drainage-channels	2,058 0 0	517 0 4	927 7 3
Schools of Mines	1,598 2 1	1,598 2 1	..
Prospecting deep levels	..	..	..
Water-conservation	2,680 19 1	3,787 17 9	..
Resumption of land	..	..	..
Compensation proclamation of rivers	6,083 18 9	6,083 18 9	..
Aid towards the treatment of ores	778 1 0	778 1 0	..
	69,836 18 6	65,922 17 5	51,232 4 2
1901–2.			
Roads on goldfields	80,602 9 4	44,697 10 0	35,904 19 4
Roads and tracks undertaken by County Councils, subsidised by Mines Department	34,216 16 8	2,847 17 3	1,909 0 11
Works undertaken by prospecting associations and companies, subsidised by Mines Department	2,578 10 8	1,509 10 9	1,826 6 2
Water-races	5,860 3 5	6,665 15 1	1,760 16 1
Drainage-channels	1,005 1 8	889 4 6	1,390 3 7
Schools of Mines	2,087 13 8	2,087 13 8	..
Prospecting deep levels	..	..	..
Water-conservation	2,114 12 5	942 13 10	1,171 19 7
Resumption of land	..	..	..
Compensation proclamation of rivers	5,318 2 9	5,318 2 9	..
Aid towards the treatment of ores	77 17 0	27 17 0	50 0 0
	133,861 7 7	64,986 4 10	44,013 5 10
1902–3.			
Roads on goldfields	62,389 0 5	50,230 12 3	48,063 7 6
Roads and tracks undertaken by County Councils, subsidised by Mines Department	2,285 0 0	1,409 0 8	1,512 1 11
Works undertaken by prospecting associations and companies, subsidised by Mines Department	1,595 17 0	1,131 0 4	1,821 17 7
Water-races	6,122 11 11	5,316 10 3	..
Drainage-channels	2,896 14 2	1,567 13 8	2,454 14 9
Schools of Mines	2,533 14 2	2,533 14 2	..
Prospecting deep levels	..	..	..
Water-conservation	2,535 0 10	2,982 0 5	725 0 0
Resumption of land	..	..	..
Proclamation of rivers	13,215 10 8	13,215 10 8	..
Aid towards the treatment of ores	50 12 5	50 12 5	..
	93,624 1 7	78,436 14 10	54,577 1 9

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SUMMARY OF WORKS CONSTRUCTED—*continued.*

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
1903–4.	£ s. d.	£ s. d.	£ s. d.
Roads on goldfields	60,427 18 6	45,116 3 0	23,975 3 0
Roads and tracks undertaken by County Councils, subsidised by Mines Department	600 0 0	428 10 1	..
Works undertaken by prospecting associations and companies, subsidised by Mines Department	1,994 8 0	1,082 17 3	1,380 9 7
Water-races	883 12 3	683 12 3	200 0 0
Drainage-channels	2,135 17 0	1,684 15 9	458 5 0
Schools of Mines	2,366 9 9	2,366 9 9	..
Prospecting deep levels	6,099 18 1	6,099 18 1	..
Water-conservation	1,819 4 5	1,544 4 5	..
Proclamation of rivers	5,176 17 7	5,176 17 7	..
Aid towards the treatment of ores	49 10 0	49 10 0	..
	81,553 15 7	64,238 18 2	25,413 17 7
1904–5.			
Roads on goldfields	58,098 14 10	25,975 14 2	32,123 0 8
Roads and tracks undertaken by County Councils, subsidised by Mines Department	253 0 0	136 10 0	40 0 0
Works undertaken by prospecting associations and companies, subsidised by Mines Department	3,229 16 8	2,569 11 8	1,627 17 6
Water-races	631 1 0	509 8 6	21 12 6
Drainage-channels	893 4 1	747 17 10	145 6 3
Schools of Mines	2,381 5 5	2,381 5 5	..
Prospecting deep levels	178 5 7	178 5 7	..
Water-conservation	372 7 11	372 7 11	..
Proclamation of rivers	1,880 5 8	1,880 8 5	..
	67,918 1 2	34,751 9 6	33,957 16 11
Summary.			
Roads on goldfields	572,047 18 3	539,924 17 7	32,123 0 8
Subsidised roads and tracks	174,652 1 5	103,268 12 2	40 0 0
Subsidised roads and tracks other than on goldfields	6,146 9 10	4,759 6 2	..
Prospecting	87,306 17 6	34,937 5 10	1,627 17 6
Water-races	102,028 11 11	98,321 7 1	21 12 6
Wharves	435 15 9	285 15 9	..
Schools of Mines	36,892 13 3	36,892 13 3	..
Drainage-channels	43,981 8 4	30,429 16 9	145 6 3
Diamond drills	5,170 11 4	3,428 11 4	..
Treatment of ores	3,213 10 6	2,563 10 6	..
Tracks to open up mineral lands	325 8 1	325 8 1	..
Artesian-well boring, Maniototo Plains	800 0 0	800 0 0	..
Repairing flood damages	500 0 0	500 0 0	..
Prospecting deep levels	57,278 3 8	31,778 3 8	..
Resumption of land	3,112 7 0	3,112 7 0	..
Water-conservation	24,955 18 2	24,955 18 2	..
Construction of telephone-lines	60 0 0	50 0 0	..
Proclamation of rivers	38,358 12 8	38,358 12 8	..
	1,157,266 7 8	954,692 6 0	33,957 16 11

List of Works on Goldfields undertaken wholly by the Mines Department, or by Subsidies to County Councils, Local Bodies, and Prospecting Associations, in Progress on the 31st March, 1905.

Locality and Nature of Works.	Total Cost, or Amount authorised.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
MIDDLE ISLAND.			
Roads (subsidised).			
Westland County.	£ s. d.	£ s. d.	£ s. d.
Hut at Wilberforce	60 0 0	..	30 0 0
Improving Upper Browning's Pass Track	20 0 0	..	10 0 0
	80 0 0	..	40 0 0

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LIST of WORKS on GOLDFIELDS undertaken wholly by the Mines Department, or by Subsidies to County Councils, Local Bodies, and Prospecting Associations, in Progress on the 31st March, 1905.

Locality and Nature of Works.	Total Cost, or Amount authorised.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
WORKS UNDER CONSTRUCTION WHOLLY BY MINES DEPARTMENT.	£ s. d.	£ s. d.	£ s. d.
Wainihinihi to Kawhaka	150 0 0	..	150 0 0
Christchurch Road to Wainihinihi River	100 0 0	..	100 0 0
Main South Road (repairs)	2,000 0 0	121 17 6	1,878 2 6
Cabbage Bay–Port Charles and Cape Colville	2,822 0 0	2,742 0 0	80 0 0
Tairua–Whenuakite	1,050 0 0	950 0 0	100 0 0
Coromandel–Kuaotunu, *via* Matarangi	2,243 0 0	2,143 0 0	100 0 0
Tiki–Kaimarama	1,285 10 0	1,185 10 0	100 0 0
Tiki–Manaia	1,733 13 0	1,633 13 0	100 0 0
Manaia–Waikawau	5,431 0 0	5,345 0 0	86 0 0
Mercury Bay–Whenuakite and Boat Harbour	800 0 0	700 0 0	100 0 0
Kuaotunu–Mercury Bay	1,722 11 6	1,522 11 6	200 0 0
Whitianga–Gumtown	1,059 6 6	859 6 6	200 0 0
Wharf Road, Coromandel	1,678 12 6	1,578 12 6	100 0 0
Whitianga–Kaimarama	1,299 0 0	1,123 16 1	175 3 11
Opitonui Road	999 0 0	849 0 0	150 0 0
Four-in-hand Road	529 18 0	473 8 0	56 10 0
Kapowai Track	689 0 0	644 0 0	45 0 0
Mahaki Goldfields Track	300 0 0	250 0 0	50 0 0
Waitaia Mine to Battery	400 0 0	357 17 3	42 2 9
Ward's Road–Cape Colville	350 0 0	240 0 0	110 0 0
Repairs, Mercury Bay Wharf	44 2 6	..	44 2 6
Kauris–Mahakirau	100 0 0	..	100 0 0
Scotty's Mine to Battery	110 0 0	85 10 0	24 10 0
Kaimarama Bridge	350 0 0	..	350 0 0
Waikawau–McLaughlin's	100 0 0	75 0 0	25 0 0
Sullivan's Bridge, near Hooker's	100 0 0	50 0 0	50 0 0
Mercury Bay–Tairua	100 0 0	..	100 0 0
Cabbage Bay Bridge	350 0 0	..	350 0 0
Thames–Waikawau	2,881 15 3	2,681 15 3	200 0 0
Thames–Hikutaia	2,679 15 5	2,479 15 5	200 0 0
Upper Tararu Road	1,756 9 11	1,626 6 2	130 3 9
Turua–Netherton	1,625 5 0	1,538 5 0	87 0 0
Hikutaia–Whangamata "Wires" Track	2,411 7 6	2,261 7 6	150 0 0
Omahu–Whangamata	2,095 0 0	1,945 0 0	150 0 0
Puriri–Neavesville	949 10 0	799 10 0	150 0 0
Neavesville–Upper Landing	820 0 0	527 0 0	293 0 0
Upper Landing–Tairua	600 0 0	450 0 0	150 0 0
Hikuwai Bridge	150 0 0	..	150 0 0
Thames–Whangamata	687 0 0	585 5 2	101 14 10
Karaka Creek Road	200 0 0	150 0 0	50 0 0
Hape Creek Road	250 0 0	200 0 0	50 0 0
Tapu–Gumtown	757 0 0	562 11 0	194 9 0
Moanataiari Road	250 0 0	200 0 0	50 0 0
Kaueranga Bridge	499 6 0	299 6 0	200 0 0
Maratoto Road	200 0 0	100 0 0	100 0 0
Big Slip, Thames–Waikawau	100 0 0	..	100 0 0
Tararu Creek Road	100 0 0	..	100 0 0
Rocky Point (widening)	100 0 0	..	100 0 0
Hikutaia–Waihi	3,775 0 0	3,589 14 0	185 6 0
Waitekauri–Golden Cross	2,664 0 0	2,222 15 0	441 5 0
Waihi–Whangamata	907 0 0	861 0 0	46 0 0
Paeroa–Waitoa	2,235 13 4	2,135 13 4	100 0 0
Waihi–County Boundary	1,496 10 0	1,393 5 3	103 4 9
Komata Creek Road	840 0 0	454 10 9	385 9 3
Waitawheta Road deviation	608 0 0	514 0 0	94 0 0
Hikutaia–Maratoto	544 2 6	394 2 6	150 0 0
Waitekauri–Jubilee	200 0 0	100 0 0	100 0 0
Alpha–Komata	100 0 0	..	100 0 0
Rotokohu–Karangahake	100 0 0	..	100 0 0
Hill Track–Willows Camp	100 0 0	..	100 0 0
Ford Road–Mackaytown	100 0 0	..	100 0 0
Mangakino Track	100 0 0	..	100 0 0
Onamalutu–Wakamarina	808 0 0	688 0 0	120 0 0
Cullensville–Waikakaho	30 0 0	..	30 0 0
Wakamarina Road and Bridges	50 0 0	..	50 0 0
Deep Creek Bridge	150 0 0	..	150 0 0
Motueka River (protective works)	280 5 8	200 0 0	80 5 8
Wangapeka–Baton	900 0 0	750 5 0	150 0 0
Thorpe–Baton	100 0 0	..	100 0 0
Shaggery Bridge	300 0 0	..	300 0 0
Riwaka–Kaiteriteri	203 19 6	153 19 6	50 0 0
Chandler's–Wangapeka Junction	200 0 0	100 0 0	100 0 0
Riwaka Bridge (protective works)	100 0 0	..	100 0 0
Graham River Bridge	200 0 0	..	200 0 0
Aniseed Valley Road (repairs)	100 0 0	..	100 0 0
Stanley Brook Bridge	300 0 0	..	300 0 0
Ferntown–Pakawau	807 0 0	755 13 6	51 6 6
Pakawau–Tamatea	373 18 0	247 18 0	126 0 0
Kaituna Bridge	400 0 0	..	400 0 0
Takaka–Collingwood "Inland" Road	3,973 19 11	3,773 19 11	200 0 0

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List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost, or Amount authorised.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
Works under construction wholly by Mines Department—*continued.*	£ s. d.	£ s. d.	£ s. d.
Collingwood–Taitapu	200 0 0	..	200 0 0
Waratah–Puponga	100 0 0	..	100 0 0
Anatoki Track	350 0 0	250 0 0	100 0 0
Vants–Bubu	350 0 0	300 0 0	50 0 0
Pariwakakaho–McArtney's	100 0 0	..	100 0 0
Millerton Road (widening)	1,450 0 0	1,300 0 0	150 0 0
Wilson's Lead Road	1,350 0 0	1,100 0 0	250 0 0
Granity Creek Southwards	1,850 0 0	1,550 0 0	300 0 0
Westport–Mokihinui	2,100 0 0	2,000 0 0	100 0 0
Karamea–Mud-flat	850 0 0	800 0 0	50 0 0
Long Tunnel–Addison's	250 0 0	..	250 0 0
Brighton–Grey County Boundary	900 0 0	750 0 0	150 0 0
Channel Flat–Mackley's	150 0 0	..	150 0 0
Loopline Road	250 0 0	..	250 0 0
Fox's Bridge (repairs)	100 0 0	..	100 0 0
Millerton–Mine Creek	745 0 0	545 0 0	200 0 0
Mokihinui–Ngakawau	1,500 0 0	1,050 0 0	450 0 0
Britannia Mine Road	900 0 0	600 0 0	300 0 0
Cedar Creek–Denniston	100 0 0	..	100 0 0
Welshman's Flat Bridge	300 0 0	..	300 0 0
Darkie's Hill Road and Bridge	100 0 0	41 12 6	58 7 6
Fairdown–Sergeant's Hill *viâ* Railway	450 0 0	250 0 0	200 0 0
Seddonville Roads	200 0 0	100 0 0	100 0 0
Seddonville Colliery to Township	250 0 0	150 0 0	100 0 0
Mear's Road	150 0 0	50 0 0	100 0 0
Denniston–Burnett's Face	350 0 0	150 0 0	200 0 0
Reefton–Maruia	3,574 0 0	3,524 0 0	50 0 0
Boatman's Creek Bridge, near Turner's	150 0 0	..	150 0 0
Boatman's Short Track	200 0 0	12 0 0	188 0 0
Matakitaki–Glenroy–Maruia	1,447 15 6	1,371 17 6	75 18 0
Maruia–Glenroy	250 0 0	..	250 0 0
Blackwater Bridge	400 0 0	359 2 9	40 17 3
Just-in-Time Shaft–Victoria Range	200 0 0	..	200 0 0
Road to Matakitaki River Bridge	200 0 0	188 0 0	12 0 0
Maruia Road *viâ* Caslani's	438 0 0	313 0 0	125 0 0
Snowy Creek to Reefs	850 0 0	750 0 0	100 0 0
Suspension Bridge, near Ten Mile	200 0 0	..	200 0 0
Kirwan's Reward to Battery-site	100 0 0	..	100 0 0
Reefton–Progress	600 0 0	420 0 0	180 0 0
Boatman's Road	100 0 0	..	100 0 0
Blackwater Road (widening)	225 0 0	140 0 0	85 0 0
Painkiller–Murray Creek	300 0 0	50 0 0	250 0 0
Waitahu River Foot-bridge, near Gannon's	150 0 0	..	150 0 0
Seven Mile–Nine Mile Bluff	2,450 0 0	2,091 17 7	358 2 5
Main Grey Bridge (repairs)	2,945 9 11	2,530 9 11	415 0 0
Moonlight-Blackball	700 0 0	450 0 0	250 0 0
New River Bridge (repairs)	250 0 0	..	250 0 0
Paparoa–Garden Gully	150 0 0	125 0 0	25 0 0
Orangipuku Foot-bridge	50 0 0	..	50 0 0
Deviation Notown Road	150 0 0	..	150 0 0
Payne's Gully Track	100 0 0	..	100 0 0
Seven Mile Creek–Taipo	1,270 0 0	1,150 0 0	120 0 0
Seddon's Terrace Track Extension	699 15 0	599 15 0	100 0 0
Humphrey's Road and Bridge	100 0 0	..	100 0 0
Kanieri Forks Road	130 0 0	..	130 0 0
Teremakau–Paroa	200 0 0	159 8 0	40 12 0
Grading No. 4 Channel Road	100 0 0	..	100 0 0
Wataroa Gorge Track	316 1 10	196 6 4	119 15 6
Larrikins Road Extension	100 0 0	..	100 0 0
Track to Westland Reefs	500 0 0	..	500 0 0
Duffer's Creek Bridge	500 0 0	314 0 0	186 0 0
Styx River Wilberforce	250 0 0	..	250 0 0
Lawrence–Waipori	2,225 0 0	2,175 0 0	50 0 0
Lawrence–Roxburgh	850 0 0	600 0 0	250 0 0
Waipori–Waitahuna	549 19 0	453 19 0	96 0 0
Waipori Bush Road	749 19 8	696 19 8	53 0 0
Lawrence–County Boundary	825 0 0	725 0 0	100 0 0
FitzGerald's Bridge	340 0 0	..	340 0 0
Waipori–Outram	200 0 0	150 0 0	50 0 0
Beaumont–Rankleburn	200 0 0	100 0 0	100 0 0
Lawrence–Clyde (Tuapeka County)	2,795 17 6	2,670 17 6	125 0 0
(Vincent County)	2,154 2 6	2,000 0 0	154 2 6
Gentle Annie–Clyde	945 0 0	625 0 0	320 0 0
Ophir Bridge	1,000 0 0	..	1,000 0 0
Cromwell–Nevis	100 0 0	..	100 0 0
Garston–Nevis (Lake County)	500 0 0	400 0 0	100 0 0
Arrow–Cardrona, *via* Crown Terrace	100 0 0	..	100 0 0
Queenstown–Gentle Annie	725 0 0	545 0 0	180 0 0
Cardrona Coal-pit Road	300 0 0	250 0 0	50 0 0
Arthur's Point–Arrowtown	200 0 0	100 0 0	100 0 0
Colac–Round Hill	600 0 0	400 0 0	200 0 0
Waikaka Township–Little Waikaka	300 0 0	150 0 0	150 0 0
Waikaka to Coal-pit	100 0 0	..	100 0 0

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List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works	Total Cost, or Amount authorised.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
Works under construction wholly by Mines Department—*continued.*	£ s. d.	£ s. d.	£ s. d.
Waikaia Bridge	250 0 0	..	250 0 0
Waikaka Valley Road to Dredging Claims	250 0 0	..	250 0 0
Makarewa Hedgehope Flood-channel	400 0 0	..	400 0 0
Stewart Island Roads	200 0 0	..	200 0 0
Stewart Island Road to Mines	250 0 0	..	250 0 0
Top Valley Road	729 9 8	624 9 8	105 0 0
Motueka Bridge	1,000 0 0	..	1,000 0 0
Mokihinui–Little Wanganui	5,508 7 4	5,504 7 6	3 19 10
Waitahu River Bridge	100 0 0	..	100 0 0
Inangahua Bridge	1,662 9 9	1,533 19 7	128 10 2
Okarito–Forks Prospecting Track	200 0 0	35 11 0	164 9 0
State Coal-mines Township Roads	250 0 0	239 6 2	10 13 10
Donnelly's Creek Bridge	100 0 0	2 6 6	97 13 6
Kanieri Bridge	950 0 0	254 16 0	695 4 0
Orepuhi–Preservation Inlet	3,888 9 4	3,884 12 0	3 17 4
McCullough and Parkers' Creeks Protection	160 0 0	..	160 0 0
Westport–Waimangaroa	600 0 0	150 3 3	449 16 9
Waimangaroa–Fairdown	540 0 0	200 7 3	339 12 9
Denniston Hill Road	6,213 2 7	6,041 16 7	171 6 0
Taylorville Bridge	2,308 15 5	1,973 13 0	335 2 5
Arnold Bridge	900 0 0	5 16 6	894 3 6
Great South Road	19,379 16 0	19,379 16 0	..
Collingwood Bridge and Approaches	9,278 18 2	9,278 18 2	..
Reefton–Hokitika–Ross	21,491 17 11	21,491 17 11	..
Mount Hercules Deviation	373 3 0	373 3 0	..
	198,542 2 1	166,419 1 5	32,123 0 8
Schools of Mines.			
Schools of Mines	25,839 7 1	25,839 7 1	..
School of Mines (Otago University)	11,053 6 2	11,052 6 2	..
	36,892 13 3	36,892 13 3	..
Prospecting Subsidies.			
Victoria Gold-mining Company "Favourite" Claim (Thames foreshore)	1,184 0 0	497 10 8	686 9 4
Thames Goldfields Improvement Committee	2,400 0 0	1,887 11 1	512 8 11
Coromandel County (J. D. Regan)	22 10 0	15 0 0	7 10 0
Coromandel County (J. and M. Fitzgerald)	78 1 0	71 11 0	6 10 0
Coromandel County (J. Dyer)	60 0 0	..	30 0 0
Coromandel County (W. Newsham)	26 0 0	..	13 0 0
Coromandel County (A. McNeil)	45 0 0	7 10 0	15 0 0
Takaka Miners' Association (Lloyd and McGrath)	26 0 0	..	13 0 0
Buller County (McKay and Young)	310 0 0	28 18 6	121 1 6
Westland County (Jamieson and Garvin)	125 0 0	7 2 6	56 1 6
Kanieri Miners' Association (Ellis and Reitze)	100 0 0	..	48 7 6
Westland County (prospecting Rimu, £1 for £1)	4,893 8 8	2,446 14 4	..
Westland County (Boyd and party)	250 0 0	29 6 3	113 8 9
Coromandel County (prospecting parties)	939 10 0	939 10 0	..
	10,459 9 8	5,930 14 4	1,627 17 6
Water-races.			
Waimea-Kumara Water-race	51,662 5 7	51,662 5 7	..
Mount Ida Water-race	11,487 19 4	11,466 6 10	21 12 6
	63,150 4 11	63,128 12 5	21 12 6
Drainage and Tailings Channels.			
Jones Creek Storm-channel	100 0 0	100 0 0	..
Waimea Main Tail-race	1,994 6 8	1,974 0 5	20 6 3
St. Bathan's Channel	2,000 0 0	1,875 0 0	125 0 0
Kelly's Terrace Tunnel	2,141 10 6	2,141 10 6	..
	6,235 17 2	6,090 10 11	145 6 3
Water-conservation on Goldfields.			
Engineer's salary and expenses	2,977 16 8	2,977 16 8	..
	2,977 16 8	2,977 16 8	..
Summary of Works.			
Roads (subsidised)	80 0 0	..	40 0 0
Works under construction wholly by Mines Department	198,542 2 1	166,419 1 5	32,123 0 8
Schools of Mines	36,892 13 3	36,892 13 3	..
Prospecting subsidies	10,459 9 8	5,930 14 4	1,627 17 6
Water-races	63,150 4 11	63,128 12 5	21 12 6
Drainage-channels	6,235 17 2	6,090 10 11	145 6 3
Compensation, proclamation of rivers	38,358 12 8	38,358 12 8	..
Water-conservation on goldfields	2,977 16 8	2,977 16 8	..
Total	356,696 16 5	319,798 1 8	33,957 16 11

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LIST of WORKS on GOLDFIELDS constructed wholly by the Mines Department, or by Subsidies to County Councils, Local Bodies, and Prospecting Associations, and completed prior to the 31st March, 1905.

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
NORTH ISLAND.						
ROADS (SUBSIDISED).						
Bay of Islands County.	£	s.	d.	£	s.	d.
Tiriwhanga Gorge to Galbraith's Road, Puhipuhi	237	0	0	118	10	0
Air-line Road to battery-site, Puhipuhi	73	0	0	36	10	0
Tiriwhanga Gorge to Puhipuhi	800	0	0	800	0	0
New Bay of Islands Coal Company	500	0	0	250	0	0
Road, Taumarere Railway-station to Puhipuhi	482	0	0	146	0	0
	2,092	0	0	1,351	0	0
Coromandel County.						
Improving road to Iona and Just-in-Time Companies' mines	200	0	0	133	6	8
Making and improving track from Tokatea towards Kennedy Bay	320	0	0	213	6	8
Golden Belt Track	100	0	0	50	0	0
Tokatea Road (repairs)	300	0	0	150	0	0
Making and improving track from Golden Belt to Tiki	239	3	3	159	8	10
Making road from Ring's Bridge to Kapanga Mine	150	0	0	100	0	0
Making road to Kapanga Mine	132	0	0	88	0	0
Temporary track from Tokatea Saddle to Waikoromiko	50	0	0	33	6	8
Continuation of track from Success Company's mine to top of main range	80	0	0	53	6	8
Completion of road from Tokatea Saddle to Tokatea Battery	50	0	0	33	6	8
Widening road from Matawai to Vaughan's claim	357	0	0	238	0	0
Improving track, Mercury Bay to Waitai	100	0	0	66	13	4
Continuation and improving Waikoromiko Track	150	0	0	100	0	0
Emily Battery to Rocky Creek	60	0	0	40	0	0
Track, Bismarck Battery to Kennedy Bay	200	0	0	133	6	8
Road up Manaia	675	10	6	450	7	0
Extension of Vaughan's and Vizard's Tracks	150	0	0	100	0	0
Vizard's towards Marebel	200	0	0	133	6	8
Extending and widening Waitaia Road	100	0	0	66	13	4
Makarau to Waiau	1,600	0	0	1,066	13	4
Waikawau to Tiki	500	0	0	333	6	8
Paul's Creek to Cabbage Bay	200	0	0	133	6	8
Waikawau Creek Track	100	0	0	50	0	0
McLaughlin's Road	100	0	0	50	0	0
Manaia to McGregor's New Find	100	0	0	50	0	0
Manaia to Tiki	500	0	0	250	0	0
Old sawmill towards Matawai	200	0	0	100	0	0
Extension of Paul's Creek Track	300	0	0	150	0	0
Matarangi Track	400	0	0	200	0	0
Thames–Coromandel Road, *viâ* Manaia	300	0	0	150	0	0
Harbour View extension	210	0	0	105	0	0
Kapanga to Paul's Creek	200	0	0	100	0	0
Mercury Bay to Kuaotunu	360	0	0	180	0	0
Wainara to Kuaotunu	450	0	0	225	0	0
Sea-beach to Kuaotunu	1,650	0	0	1,450	0	0
Just-in-Time Road, extension to Coromandel	450	0	0	225	0	0
Road, Waikawau Bridge to McLaughlin's	67	10	0	45	0	0
Mercury Bay Road	990	0	0	495	0	0
Bridge to Dugend's store, and widening and metalling road from bridge to Log Hut	450	0	0	300	0	0
Road from junction of Red Mercury battery up Pumpkin Flat to Waitaia	345	0	0	230	0	0
To connect road from Log Hut to commencement of contract of Kuaotunu–Mercury Bay Road	150	0	0	100	0	0
Road, with culverts and bridge, from Kapanga Hill to Scotty's Gold-mining Company's mine	200	0	0	150	0	0
Pumpkin Flat–Just-in-Time Road	310	0	0	170	0	0
Lower road from Great Mercury battery to Kapai low level and battery-site	450	0	0	300	0	0
Road from main road, Kapanga to Success Mine	600	0	0	300	0	0
Cemetery Road and Bridge, Kuaotunu	100	0	0	75	0	0
Road from Coromandel–Kennedy Bay Main Road to Wereroa Creek	300	0	0	150	0	0
Leading Wind Mine Road	100	0	0	50	0	0
Fury's Bridge	450	0	0	225	0	0
Carroll's Bridge	400	0	0	200	0	0
Horne's Bridge	200	0	0	100	0	0
Road from Main Kennedy Bay Road to Monte Carlo and other claims	300	0	0	150	0	0
Castle Rock Mine Road, Tiki	200	0	0	100	0	0
Road between Bismarck Battery and Hauraki Associated Gold-reefs	400	0	0	200	0	0
Bridge, Warekaho Creek	300	0	0	150	0	0
Cabbage Bay to Mines	300	0	0	150	0	0
Two bridges and approaches, Kuaotunu Main Road	300	0	0	150	0	0
Road from Success Road to workings of Karaka Block Syndicate	200	0	0	100	0	0
Widening Waitaia Battery Road	100	0	0	50	0	0
Cabbage Bay–Waitete	240	0	0	120	0	0
Cabbage Bay–Ward's Track	200	0	0	100	0	0
Repairs, bridges, Kuaotunu Main Road	200	0	0	100	0	0
Coromandel–Mercury Bay	200	0	0	35	0	0
	19,286	3	9	11,455	15	10

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LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
Te Aroha Town Board.	£ s. d.	£ s. d.
Road to connect with railway-station	120 0 0	60 0 0
Lipsey's Bridge	64 0 0	32 0 0
Repairing flood-damages	150 0 0	75 0 0
	334 0 0	167 0 0
Thames County.		
Making new road from Ohinemuri River to Karangahake Quartz-mine	650 0 0	433 6 8
Dray-road to connect Otanui Mines with crushing-battery at Maungawherawhera Creek	710 0 0	473 6 8
Improving roads from Waitekauri Road to Katikati Road	250 0 0	166 13 4
Improving road up Karaka Creek to Lucky Hit Company's mine	263 1 0	175 7 4
Improving road to upper mines, Waitahi	258 18 10	172 12 7
Karangahake to battery	300 0 0	200 0 0
Ralph's Battery, Waitekauri	399 1 0	199 10 6
Otanui Road to mines	299 18 0	199 18 8
Road to Wick's Battery	70 0 0	46 13 4
Rocky Point Road, Tararu	300 0 0	200 0 0
Thames Borough boundary to hæmatite-mine	350 0 0	233 6 8
Widening road from bridge over Hape Creek to Otanui Mines	183 17 0	122 11 4
Track, Karangahake Goldfield	784 1 0	522 14 0
Kauaeranga Valley to Otanui	470 7 0	313 11 4
Tapu Road to mines	81 17 9	54 11 10
Tauranga Road to Karangahake Bridge-site	341 5 0	227 10 0
Karangahake Bridge	229 6 6	152 17 8
Track up Maungakerikeri Creek	93 4 4	62 2 11
Thames Borough boundary to Hape Creek No. 2	600 0 0	300 0 0
Upper Karaka Road	179 13 0	119 15 4
Repairing flood-damages, Waiotahi, Moanataiari, Karaka, and Collarbone Roads	350 0 0	175 0 0
Sea-beach to Waiomo	750 0 0	375 0 0
Te Papa Gully Road	75 0 0	37 10 0
New Find to Waiomo Battery	110 0 0	55 0 0
Rocky Point Road	429 11 10	214 15 11
Waiotahi towards Mercury Bay	522 11 0	261 5 6
Te Mata Road	178 17 6	89 8 9
Waiomo Creek to Tapu	1,499 0 0	749 10 0
Alabama Creek Track	100 0 0	50 0 0
Road from Prospectors' Mine, Puriri, to battery	50 0 0	25 0 0
Karaka Creek to Lucky Hit	365 0 0	182 10 0
Bullion Mine, Tapu, to battery	36 5 0	18 2 6
Track to Hikutaia Goldfield	147 15 2	73 17 7
Upper Tararu Road to Sylvia Mine	684 7 0	342 3 6
Road to Puriri Battery	11 13 0	5 16 6
Thames–Waikawau Road	37 10 0	18 15 0
Track from Tararu Creek Road to McDermot's Claim	45 0 0	22 10 0
Track to Try Fluke Claim, Tapu	94 15 0	47 7 6
Waiomo to Puhoi Creek	33 0 0	16 10 0
Waiokaraka Road, Bella Street, and Campbell Street to Moanataiari Creek	200 0 0	100 0 0
Moanataiari Creek Road	100 0 0	50 0 0
Tararu Creek Road and Tararu Road	150 0 0	75 0 0
Hape Creek Road	150 0 0	75 0 0
Omahu–Tairua	100 0 0	42 0 0
Karaka Creek Road	150 0 0	68 4 6
Onetai Valley Road	40 0 0	12 10 0
Townsend's Road	80 0 0	26 12 0
Gumtown–Kapowai	300 0 0	196 9 0
Footbridge, Pepe Creek	300 0 0	51 18 6
Road from Taniwha to fourth branch Tairua River	200 0 0	100 0 0
	14,054 15 11	7,934 6 11
Thames Borough.		
Repairing roads	975 19 2	600 0 0
Widening and straightening Karaka Creek	300 0 0	150 0 0
Metalling goldfields roads	800 0 0	672 12 6
Removing *débris*, Karaka Creek	300 0 0	150 0 0
Half-cost damage, Hawk's stable	96 0 0	48 0 0
Repairs, Moanataiari Creek Tunnel	100 0 0	52 0 0
Repairs, Moanataiari and Waiotahi Aqueducts	620 0 0	375 0 0
Repairs, Waiotahi Creek Bridge	50 0 0	25 0 0
Removing *débris*, Karaka and Waiotahi Creeks	350 0 0	275 0 0
Water-tables, Kirkwood Street	20 0 0	11 12 6
Clearing *débris*, Waiotahi Creek	225 0 0	112 10 0
	3,836 19 2	2,471 15 0
Ohinemuri County.		
Jubilee Mine Track	118 0 0	59 0 0
Track up Tui Creek	306 0 0	153 0 0
Prospecting-track, Whangamata and Waitekauri	200 0 0	166 13 4
Tramway, Karangahake to Riley's reduction-works	400 0 0	200 0 0
Strengthening bridges, Waihi Road	200 0 0	133 6 8
Paeroa to Hikutaia	400 0 0	200 0 0
Repairs, flood-damages	34 13 8	17 6 10
Hikutaia River to Marototo Mine	180 15 0	90 7 6

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LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
	£ s. d.	£ s. d.
Ohinemuri County—continued.		
Karangahake through Gorge (bridge and culverts)	200 0 0	100 0 0
Waitekauri Lower Road	360 0 0	189 2 8
Metalling Karangahake Gorge Road	170 0 0	85 0 0
Karangahake and Waihi Road	237 10 0	118 15 0
Karangahake Hill Track	87 4 0	43 12 0
Bridge over Ohinemuri River at Karangahake	12 11 0	6 5 6
Hikutaia–Paeroa Road	500 0 0	250 0 0
Paeroa–Te Aroha Road	200 0 0	100 0 0
Tui Creek Track	129 18 6	64 19 3
Waitekauri to Lowrie's and Birnie's	200 0 0	100 0 0
Road, Karangahake to Waihi	246 12 3	164 8 2
Lower Waitekauri Road	347 13 4	230 16 4
Road, Thames Road to Netherton Punt	60 0 0	50 0 0
Komata Creek Road	600 0 0	300 0 0
Road, Paeroa Bridge to Kuaoti Creek	400 0 0	133 6 8
Punt at south end Netherton–Paeroa Road	275 0 0	175 0 0
Repairs, Waitekauri Township Road	200 0 0	100 0 0
Bridge, Paeroa–Te Aroha Road	60 0 0	30 0 0
Karangahake Bridge	1,032 0 0	512 16 9
Drain along Mill Road, Paeroa	200 0 0	90 2 5
Road, Te Iringa-o-Pirori Block	200 0 0	143 0 0
Road running south on left bank Waihou River	400 0 0	384 19 0
Kaimanawa Road	200 0 0	126 2 6
Mangaiti and Waitoa Road and Punt	200 0 0	119 7 10
Earl of Glasgow Claim Track	400 0 0	300 0 0
Low Level Tunnel, Jubilee Mine (E. Kersey Cooper)	1,500 0 0	750 0 0
	10,257 17 9	5,687 8 5
Waitoa Road Board.		
Drain, Te Aroha West	200 0 0	130 0 0
Piako County.		
Extension and completion of Te Aroha Tramway	18,000 0 0	12,000 0 0
Tramway to Fergusson's Battery, Waiorongomai	1,500 0 0	1,000 0 0
Road, Waiorongomai	497 17 0	331 18 0
Track to claims at Buck's Reef	55 5 6	36 17 0
Track, Fern Spur to Butler's Spur	231 17 9	154 11 10
Tracks up Stony Creek, Te Aroha Goldfield, &c.	54 0 0	36 0 0
Repairs, Upper Premier Track and new track towards Waitawheta	40 0 0	20 0 0
Repairs, Te Aroha–Lichfield Road	302 0 0	125 0 0
Waiorongomai Tramway	263 2 0	175 0 0
Gordon–Waharoa	100 0 0	50 0 0
Te Aroha–Gordon	200 0 0	100 0 0
Murphy's Bridge	24 0 0	12 0 0
Repairs, Waiorongomai Tramway	600 0 0	385 0 0
Waihou Bridge	580 0 0	290 0 0
Repairs, Te Aroha Tramway	150 0 0	75 0 0
	22,598 2 3	14,791 6 10
Katikati Road Board.		
Katikati–Karangahake Track	400 0 0	200 0 0
Bridge on branch road to Katikati	68 0 0	34 0 0
Te Aroha Track	39 19 6	19 18 9
	507 19 6	253 18 9
Hutt County.		
Road to connect Otorongo Bay with Albion Company's battery, also to connect Terawhiti Quartz-mine with battery	509 16 6	210 17 0
Road, Makara Junction to Terawhiti	450 0 0	225 0 0
	959 16 6	435 17 0
SOUTH ISLAND.		
ROADS (SUBSIDISED).		
Marlborough County.		
Track, Deep Creek to Dead Horse Creek	68 0 0	45 6 8
Mouth of Gorge to Forks, Cullensville to Mahakipawa Diggings	450 0 0	225 0 0
Formation of road at Cullensville, Mahakipawa	217 4 0	108 12 0
Havelock–Mahakipawa Road	905 0 0	505 0 0
Dead Horse Creek to Sunnyside	75 0 0	50 0 0
	1,715 4 0	933 18 8
Waimea County.		
Road to open up Table Diggings	260 0 0	130 0 0
Punt over Motueka River	100 0 0	50 0 0
Repairing Baton to Table-land Track	40 0 0	20 0 0
Dove River to Baton Saddle, and from Rolling River to Wangapeka Saddle ..	120 0 0	60 0 0
Repairs, Motueka Bridge	939 8 8	469 14 4
	1,459 8 8	729 14 4

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List of Works on Goldfields, &c.—*continued*.

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
	£	s.	d.	£	s.	d.
Collingwood County.						
Road, West Wanganui	300	0	0	200	0	0
Bridge over Aorere River	173	14	0	115	16	0
Extending Anatoki Bridle-track	160	0	0	80	0	0
Bridge over Takaka River at Pain's Ford	1,597	7	8	798	13	10
Repairs, Silverstream Bridge, and forming and metalling Bainham Road	200	0	0	100	0	0
Kaituna–Ferntown	250	0	0	150	0	0
Takaka roads	600	0	0	400	10	0
Collingwood–Kaituna	400	0	0	300	0	0
	3,681	1	8	2,144	19	10
Buller County.						
Deviation of road from Candlelight Flat to Deep Creek, Charleston	370	0	0	246	13	4
Road from Orowaiti Lagoon to North Terrace	256	18	6	171	5	8
Prospecting-track from Razorback to Paparoa Range	100	0	0	66	13	4
Track from Seatonville to Larrikin's	438	9	6	292	6	4
Waimangaroa to Denniston	787	0	0	393	10	0
Road to connect alluvial workings with Charleston Road	400	0	0	266	13	4
Track, Four-mile Creek towards Grey Valley	300	0	0	200	0	0
Road to connect alluvial diggings north of Deadman's Creek	278	0	0	185	6	8
Ngakawau to Mokihinui, *vid* beaches	100	0	0	66	13	4
Road to connect Ngakawau Railway with Mokihinui Coal Company's workings	193	0	0	128	13	4
Lyell Bluff to Victor Emmanuel Claim	650	0	0	433	6	8
Beach, Little Wanganui to Mokihinui	300	0	0	100	0	0
Cape Foulwind Road	450	0	0	300	0	0
Road up Nile Valley	56	16	4	28	8	2
Denniston extension	850	0	0	425	0	0
Promised Land towards Motueka	380	0	0	190	0	0
Road over Gentle Annie	200	0	0	100	0	0
Extension, Lyell Creek to Low-level Tunnel	60	0	0	30	0	0
Extension of track 50 chains south of Brighton	140	0	0	70	0	0
Continuation of road, Deadman's Creek	437	17	0	218	18	6
Ngakawau Railway-station to Mokihinui	50	0	0	25	0	0
Addison's Flat towards ranges	20	0	0	10	0	0
North Terrace to Oparara Diggings	500	0	0	333	6	8
Extension of Croninville Road	100	0	0	50	0	0
Waimangaroa to sea-beach	80	0	0	40	0	0
Extension of track, Oparara to Fenian Creek	100	0	0	50	0	0
Con's Creek to Beaconsfield	80	0	0	40	0	0
Addison's Flat to Caroline Terrace	200	0	0	100	0	0
Waimangaroa to sea-beach extension	390	0	0	195	0	0
Addison's Flat to Gallagher's Lead	50	0	0	25	0	0
Road to Swanston's Gold-mining Company	50	0	0	25	0	0
Repairs to roads at Lyell	200	0	0	100	0	0
Track, Fairdown from North Terrace	150	0	0	97	8	0
Improving road to Four-mile Creek, Charleston	900	0	0	450	0	0
Bridge, Waimangaroa River	70	0	0	35	0	0
Road to Piper's Flat, Addison's	450	0	0	150	0	0
Lyell Creek to Gibstown	200	0	0	66	13	4
Buller River Footbridge below Lyell	250	0	0	170	0	0
Virgin Flat Road	200	0	0	100	0	0
Orowaiti Bridge	350	0	0	325	0	0
Long Tunnel Road, Addison's	200	0	0	100	0	0
Stony Creek–Waimangaroa	300	0	0	200	0	0
	11,638	1	4	6,600	16	8
Inangahua County.						
Dray-road from Soldier's Creek to Devil's Creek	647	0	0	431	6	8
Dray-road from Inangahua to Rainy Creek Battery	900	10	0	606	6	8
Dray-road from Capleston up Little Boatman's Creek	379	0	0	252	13	4
Dray-road from Capleston up Main Boatman's Creek	697	0	0	464	13	4
Dray-road from Westport Road to Inangahua River	224	5	0	149	10	0
Track from Devil's Creek to Big River	134	3	6	89	9	0
Track from Waitahu River to Capleston	358	0	0	238	13	4
Survey and expenses	250	0	0	166	13	4
Track from Cariboo to Big River	728	0	0	364	0	0
Dray-road up Murray Creek to United Inglewood Claim	3,472	0	0	2,314	17	4
Road from Reefton to Big River, *vid* Devil's Creek	614	0	0	307	0	0
Road up Big River	922	19	0	615	6	0
Continuation of dray-road up Little Boatman's Creek	169	7	6	112	18	4
Road from Capleston to Larry's Creek	640	0	0	426	13	4
Track to connect Capleston with Lone Star	75	0	0	50	0	0
Crushington to Globe Company's workings	403	0	0	201	10	0
Snowy Creek Track	85	15	0	42	17	6
Reefton to Big River	1,792	0	0	1,194	13	4
Glenroy to Horse Terrace	254	0	0	122	10	0
Devil's Creek to Globe Hill	917	6	2	458	13	1
Extension of dray-road to Boatman's *vid* Painkiller	53	17	6	26	18	9
Mangles Valley to McGregor's Station	600	0	0	300	0	0
Globe Hill to Merrijigs	1,397	6	0	698	13	0
Larry's Creek to Lyell	1,061	15	0	530	17	6
Widening Larry's Creek Road	118	10	0	59	5	0
Road up Burke's Creek, Little Boatman's	149	0	0	74	10	0
Widening track from Scotia Tunnel, on Big River Road, to Inkermann Mine	200	0	0	80	9	0
Widening track from Fiery Cross Battery to Just-in-Time Shaft	300	0	0	150	0	0
	17,552	14	8	10,530	17	10

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LIST of WORKS on GOLDFIELDS, &c.—*continued*.

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
	£	s.	d.	£	s.	d.
Grey County.						
Road from No Town to Deep Creek	1,100	0	0	550	0	0
Road from Langdon's to Moonlight	1,600	0	0	800	0	0
Contribution from goldfields vote towards main road	2,296	6	6	2,296	6	6
Track, Waipuna to Clarke's River	1,200	0	0	800	0	0
Track, Cameron's to Cape Terrace	700	0	0	466	13	8
Road, Limestone to Maori Creek	800	0	0	533	6	0
Red Jack's to Nelson Creek	601	17	6	401	5	4
Barrytown to Deadman's	2,240	0	0	1,493	6	8
German Gully to Arnold's Flat	120	0	0	60	0	0
Baird's Terrace to Lake Brunner	400	0	0	200	0	0
Hatter's Terrace Road	1,000	0	0	500	0	0
Irishman's to Lake Brunner	2,400	0	0	1,200	0	0
Hatter's Terrace	600	0	0	400	0	0
Track, Baird's Terrace to Irishman's	250	0	0	125	0	0
Deep Creek to Bell Hill	1,331	0	0	665	10	0
Track to Blackball Diggings	790	0	0	395	0	0
Track from Ahaura, Kopara, Reese's Flat, to new rush on banks of Ahaura River	20	0	0	10	0	0
Renewal, bridge over Nelson Creek, Marsden–Dunganville Road	38	0	0	19	0	0
Repairs (corduroying), Cobden–Seven-mile Road	36	0	0	18	0	0
Repairs, Cobden–Point-Elizabeth Road	30	0	0	15	0	0
Extension Ngahere–Blackball Road to Blackball Ferry	50	0	0	25	0	0
Dray-bridge, Ten-mile Creek	688	0	0	344	0	0
Deviation, Moonlight Track	100	0	0	50	0	0
Repairs, bridges, Marsden–Dunganville Road	348	0	0	219	0	0
Seventeen-mile Bluff to Barrytown	80	0	0	40	0	0
Removing rocks, Nine- and Ten-mile Bluffs	100	0	0	50	0	0
Crœsus Battery-site, Paparoa	200	0	0	79	5	0
New River Bridge wing	100	0	0	86	0	0
River View Road	200	0	0	140	0	0
Mosquito Road	500	0	0	252	10	0
Road to Totara Flat Dredge	50	0	0	25	0	0
Maori Gully Bridge	150	0	0	75	0	0
Culverts, Nelson–Grey–Hokitika Road	300	0	0	150	0	0
Paparoa track–Garden Gully	200	0	0	100	0	0
Repairs, No Town Creek Bridge	200	0	0	110	0	0
Protective works, Big Grey Bridge	200	0	0	79	8	1
Cape Terrace Road Deviation	73	0	0	36	10	0
	21,092	4	0	12,810	1	3
Westland County.						
Improving track, Butcher's Creek to Gentle Annie Terrace	225	10	0	163	13	4
Bridle-track to Kanieri Lake	719	11	0	359	5	6
Bridle-track to Eel Creek	168	9	0	84	4	6
Tunnel-track, Galway Beach to Gillespie's Beach	437	5	0	218	12	6
Road from Duffer's Creek, Greenstone Road, to fifteen-mile peg, Christchurch Road	726	9	0	480	4	6
Continuation of track, Back Creek to Eel Creek	249	4	0	166	3	4
Bridle-track, Duffer's Creek, Bowen and Okarito Road, to sea-beach	333	18	0	222	12	0
Ross Borough boundary to Mount Greenland	1,280	15	0	853	16	8
Track, Kanieri Lake to Humphrey's Gully	279	2	0	186	1	4
Track, Larrikin's to Loop-line Dam	449	11	0	299	14	0
Rough Wainihinihi to Upper Dam	450	0	0	300	0	0
Browning's Pass to Reefs	3,311	6	0	2,207	10	8
Okarito Forks to Teal Creek	600	0	0	400	0	0
Road, Christchurch to Baldhill Range reefs	500	0	0	250	0	0
Extension of Tucker's Flat Road to New Rush	170	19	6	85	9	9
Hokitika Borough boundary (Reefton) to Shotover Rush	120	0	0	60	0	0
Track to New Rush, Back Creek	100	0	0	50	0	0
Repairing old track round Wataroa Bluff	50	0	0	25	0	0
New Rush, south side of Hokitika River	37	18	6	18	19	3
Cedar Creek Road to Farmer's Creek	55	7	0	27	13	6
Road to gold discovery near Blue Spur	75	0	0	37	10	0
Widening Seddon's Terrace Track	150	0	0	65	10	0
Branch Road at Seddon's Terrace	38	10	6	19	5	3
Track up Middle Branch, Styx River	30	0	0	15	0	0
Improving road, Seven-mile–Taipo	150	0	0	73	3	6
Widening Shallow Rush Track	300	0	0	54	17	3
	11,008	15	6	6,724	6	10
Taieri County.						
Mullocky Gully to Silver Peak	499	15	0	333	3	4
Lake County.						
Track, Skipper's to Phœnix and Scandinavian Reefs	292	2	3	194	14	10
Track to connect scheelite-mine with Lake Wakatipu	225	0	0	150	0	0
Arrowtown to Macetown, construction	225	0	0	150	0	0
Arrowtown to Macetown, maintenance	150	0	0	100	0	0
Invincible Quartz-reef Track, Rees River	300	0	0	200	0	0
Rees Valley to company's workings	61	7	6	30	13	9
Pack-track, Criffel Diggings	50	6	6	33	11	0
Left-hand Branch Road, Skipper's	63	9	10	31	14	11
Old Morven Ferry Road	289	0	0	144	10	0
Road to workings above Cardrona	70	0	0	35	0	0
Piers, Victoria Bridge	725	0	0	362	10	0
Skipper's Road Saddle to Deep Creek	200	0	0	100	0	0
Road up Dart River	150	0	0	75	0	0
Cutting n Homeward-bound Hill	100	0	0	75	0	0
Skipper's Bridge	4,244	0	0	3,244	0	0
	7,145	6	1	4,926	14	6

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List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
	£ s. d.	£ s. d.
Tuapeka County.		
Making road from top of Terrace to Waipori Bush	300 0 0	200 0 0
Road, Beaumont to Remarkable Bush	300 0 0	200 0 0
Improving road from Waipori Township to antimony-mines, Lammerlaw Ranges	200 0 0	133 6 8
Waipori Township to Waipori Bush	200 0 0	133 6 8
Clutha River to Campbell's	76 9 0	50 19 4
Waitahuna to copper-mine	200 0 0	133 6 8
Road to open up quarry for Waitahuna Bridge	160 9 10	106 19 11
Waipori Road, *vid* Bungtown	566 8 10	283 4 5
Miller's Flat Bridge	11,242 0 0	6,621 0 0
Shelter-sheds and snow-poles	100 0 0	50 0 0
Waipori Bridge	800 0 0	400 0 0
Metalling, Lawrence–Waipori	550 0 0	341 3 6
Repairs, FitsGerald's Bridge	1,500 0 0	410 0 0
	16,195 7 8	9,063 7 2
Cromwell Borough.		
Removal of sand	500 0 0	250 0 0
Wallace County.		
Track, Colac Bay to Round Hill	200 0 0	133 6 8
Pack-track to Round Hill, Colac, and Orepuki	1,050 0 0	500 0 0
Cutting tracks, Longwood	59 6 0	29 13 0
	1,309 6 0	662 19 8
Vincent County.		
Renewal bridge to Bannockburn	1,532 0 0	850 0 0
Maniototo County.		
Road to Serpentine Diggings	136 10 0	91 0 0
Pig and Whistle to Clarke's Diggings	200 0 0	133 6 8
Shepherd's Hut Flat to Vinegar Hill	100 0 0	66 13 4
Kyeburn Peninsula to main road	82 0 0	41 0 0
	518 10 0	332 0 0
Fiord County.		
Dusky Sound, tracks	300 0 0	200 0 0
Waitaki County.		
Road, Naseby to Livingstone	1,841 12 0	20 16 0
Southland County.		
Improving tracks from Mataura to Nokomai	75 0 0	50 0 0
Improving road, Waikaka to Leatham	150 0 0	100 0 0
Improving road from Waikaka Township to Leatham Creek	30 0 0	20 0 0
Improving road from Waikaka to Waikaka railway-siding	150 0 0	100 0 0
Widening and improving bush-track to Waikawa	150 0 0	100 0 0
Waikaka to Switzer's	150 0 0	100 0 0
Road near Waikaka Township	150 0 0	100 0 0
Waipapa to Six-mile Beach	175 0 0	87 10 0
Repairing bridges, Waikaia Bush	38 13 4	13 4 0
Dray-road to Ferry Terrace, Nokomai	100 0 0	50 0 0
Waikaia to Whitecomb	511 6 8	280 13 4
Parawa to Switzer's, *vid* Nokomai	150 0 0	75 0 0
Track to Switzer's Freehold Gold-mining Company	175 0 0	175 0 0
Nevis Road	100 0 0	50 0 0
Parawa to Nokomai	150 0 0	75 0 0
Waikaia to Break-'em-All Claim	100 0 0	50 0 0
Maitland Village–Mining Reserve	100 0 0	50 0 0
	2,455 0 0	1,476 7 4
Diamond and other Drills.		
Inangahua County Council (diamond)	2,000 0 0	1,000 0 0
Springfield Colliery Company (diamond)	1,250 0 0	625 0 0
Westland County Council (tiffin)	350 0 0	233 0 0
Diamond-drills for prospecting purposes	1,570 11 4	1,570 11 4
	5,170 11 4	3,428 11 4
Wharves.		
Repairs to wharf, Coromandel	300 0 0	150 0 0
Anikiwi Jetty, Marlborough	135 15 9	135 15 9
	435 15 9	285 15 9
Aids to Prospecting.		
Construction of low-level tunnel, Terawhiti	750 0 0	150 0 0
Queen of Beauty Company, prospecting deep levels	300 0 0	150 0 0
Caledonian Low-level Company, prospecting deep levels	300 0 0	150 0 0
Red Hill Gold-mining Company, prospecting deep levels	600 0 0	300 0 0
Caledonian Low-level Company, low-level tunnel	2,700 0 0	300 0 0
Lyell Creek Extended Company, low-level tunnel	300 0 0	150 0 0
New Cromwell Gold-mining Company	250 0 0	100 0 0
Deep-level Association, Waipori	450 0 0	300 0 0

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List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
Aids to Prospecting—*continued.*	£	s.	d.	£	s.	d.
Little Boatman's deep-level tunnel	600	0	0	300	0	0
Oterongia Prospecting Association	198	17	2	99	8	7
Vincent County	137	9	0	68	14	6
Tapanui Prospecting Association	25	0	0	12	10	0
Tuapeka County	12	0	0	6	0	0
Maniototo County	500	0	0	250	0	0
Pullar, Shelmerdine, and Basan	400	0	0	200	0	0
Royal Oak Association	300	0	0	150	0	0
Star of the East Quartz-mining Company	150	0	0	75	0	0
West Coast Prospecting Association	300	0	0	150	0	0
McBride and party	169	2	2	84	11	1
McLean and party	66	0	0	33	0	0
Deep-level tunnel, Tokatea	700	0	0	350	0	0
Deep-level tunnel, Owharoa	300	8	0	200	5	4
Deep-level tunnel, Tapu	1,200	0	0	600	0	0
Deep-level tunnel, Cedar Creek	1,207	10	0	603	15	0
Manuka Flat Prospecting Association	200	0	0	100	0	0
Red Hill Minerals Company	437	19	10	218	19	11
Tuapeka Prospecting Association	277	0	0	138	10	0
Cardrona Prospecting Association	800	0	0	400	0	0
Cromwell Prospecting Association	500	0	0	250	0	0
Coromandel County	550	0	0	275	0	0
Thames County	309	18	0	154	19	0
Thames Borough	200	0	0	100	0	0
Buller County	146	12	6	73	6	3
Inangahua County	488	7	0	244	3	6
Westland County	1,236	19	4	618	9	8
Grey County	871	15	2	435	17	7
Deep-level Prospecting Association, Waipori	432	9	8	216	4	10
Waipu Prospecting Association	180	0	0	90	0	0
Hokianga County	100	0	0	50	0	0
Vulcan Smelting-works, Onehunga	30	0	0	15	0	0
Ohinemuri County	100	0	0	50	0	6
Waitaki County	29	5	0	14	12	6
Waihemo County	85	9	0	42	14	0
William Fox and party	711	1	8	355	10	11
Kirk and party	176	0	10	88	4	10
Hodge and party	98	13	8	49	6	10
Carey and Hyndman	441	9	4	220	14	0
Don, Boyce, and party	107	16	0	53	18	0
Quentin McKinnon	58	10	0	29	5	0
Bullion Mine deep-level tunnel	300	0	0	150	0	0
Sutherland and party	30	0	0	15	0	0
Inangahua low-level tunnel	6,966	0	0	3,000	0	0
Deep-level tunnel, Manaia	451	4	0	225	12	0
Waimea Miners' Association, prospecting at Callaghan's	50	0	0	50	0	0
Totara Miners' Association, Ross	51	3	6	51	3	6
Ross, Cunningham, and another	9	0	0	9	0	0
Wm. Thompson, stores from Benmore Station	2	1	10	2	1	10
Totara Miners' Association, Ross	8	6	6	8	6	6
Harris, Davidson, and party	27	7	6	27	7	0
Boatman's Tailings Company	150	0	0	150	0	0
Boys's tunnel, Bluespur	94	12	3	94	12	0
Totara Miners' Association (Ross, Montina, and party)	246	10	0	246	10	0
Gillam's Gully Prospecting Association	94	15	0	94	15	0
Deep-level Prospecting Committee, Dillmanstown	407	0	3	407	0	3
Westport Prospecting Association	25	0	0	25	0	0
Te Aroha Prospecting Association	20	12	6	20	12	6
Robert Richie, Kuaotunu	72	3	0	36	1	0
Owharoa Tunnel (Lindsay Jackson)	325	0	0	162	10	0
Coromandel County (£1 for £1)	200	0	0	100	0	0
Mr. G. Rehay, Arahura	98	15	0	49	7	6
Hyndman and party, Callaghan's Flat	552	14	6	276	7	3
Lakes Mapourika, Waiho, and Wataroa Miners' Association	53	12	0	26	16	0
Kumara Miners' Association	22	10	0	11	5	0
Thames Miners' Union	75	15	0	37	17	6
Star of Canterbury Miners' Association	38	5	0	19	2	6
Miners' Association, Rimu	16	0	0	8	0	0
Buller County (Messrs. Negri and others)	27	0	0	13	10	0
Johnson and party, tunnel at Callaghan's Flat	90	0	0	45	0	0
W. L. Webb, Nelson	24	0	0	12	0	0
Kumara Miners' Association (Solberg, Stewart, and party)	64	15	0	32	7	6
Buller County, between head of Fox's River, Brighton, and Deadman's Creek	29	5	0	14	12	6
Welcome United Gold-mining Company, Greymouth	245	12	6	122	16	3
Orepuki Miners' Association	90	0	0	45	0	0
Totara Miners' Association (Gagliardi and party)	12	10	0	6	5	0
Contingencies	484	15	10	242	7	11
Halligan and party, tunnel at Cedar Creek	198	1	10	99	0	11
Totara Miners' Association (Chamberlain and party)	208	10	0	104	5	0
Miners' Association, Greenstone	59	0	0	29	10	0
Westland County (T. Radonicki and party)	40	0	0	20	0	0
Waimea Miners' Association (Lot, Keir, and party)	90	0	0	45	0	0
Cardrona Prospecting Association	140	5	4	70	2	8
Waimea Miners' Association, Stafford	113	1	0	56	10	6

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LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost			Amount of Contribution paid by Mines Department.		
AIDS TO PROSPECTING—*continued.*	£	s.	d.	£	s.	d.
H. Crossan, Beaumont	28	0	0	14	0	0
Prospecting Association, Westport	39	0	0	19	10	0
Cape Colville Prospecting Syndicate	32	0	0	16	0	0
Port Charles Prospecting Association	28	0	0	14	0	0
Totara Miners' Association, Ross	24	0	0	12	0	0
Lake Mapourika Miners' Association	12	0	0	6	0	0
Lister and Robertson, Karamea	13	0	0	13	0	0
Canada Reefs Tunnel	187	10	0	93	15	0
Otago Miners' Association	600	0	0	291	8	2
Westland County (Goudie and party)	215	19	9	107	19	6
Paparata Road Board	26	0	0	13	0	0
Tauranga County (Te Puke Prospecting Association)	50	0	0	25	0	0
Havelock Miners' Association	78	0	0	39	0	0
Ohinemuri County	200	0	0	6	0	0
Mr. Olderog, Arahura	54	18	0	16	4	0
Miners' Association, Ross (J. Smith and party)	135	0	0	61	7	6
Extension of low-level tunnel, Boatman's	300	0	0	137	7	11
Prospecting-tunnel, south side Inangahua River	60	0	0	25	0	0
Prospecting Association, Mokihinui	40	0	0	15	0	0
Miners' Association, Kumara (John Kane)	9	0	0	1	2	6
Prospecting Association, Invercargill	150	0	0	68	13	6
Miners' Association, Kuaotunu	40	0	0	13	2	6
Miners' Association, Ross (Waylen and party)	50	0	0	16	13	0
Prospecting Association, Coromandel (Leahy and others)	200	0	0	100	0	0
Adit-level, Maungatawhiri Creek (G. B. Osmond)	120	0	0	68	17	0
Bay of Islands County Prospecting, Pokaka	112	13	0	112	13	0
Prospecting Russell's Outcrop	100	0	0	100	0	0
Fox's River Prospecting Association (A. T. Bate, secretary)	19	10	0	19	10	0
Buller County (Newton and party, shaft, Ballarat Terrace)	22	15	0	22	15	0
Buller County (Spence and party)	19	10	0	19	10	0
Wairau Miners' Association	50	0	0	48	4	0
Miners' Association, Nelson Creek (Thrower and Potts)	45	0	0	45	0	0
Miners' Association, Dillmanstown (Turnbull and others)	7	10	0	7	10	0
Miners' Association, Ross (Gagliardi and party)	64	18	0	64	18	0
Miners' Association, Ross (Allen and Son)	40	0	0	20	0	0
Miners' Association, Greenstone (Black and party)	27	0	0	27	0	0
Miners' Association, Cardrona	40	0	0	40	0	0
Miners' Association, Lowburn (E. Murrell)	20	0	0	13	5	0
Puhipuhi Prospecting Association	200	0	0	13	15	0
Thames County (F. and J. Wallis)	97	10	0	35	19	2
Thames County (Sheridan Company's tunnel, Tapu)	180	10	0	30	5	0
Cinnabar Mining Company, Auckland (£1 to £1 10s.)	162	16	9	108	11	2
H. H. Adam's, Waiorongomai	250	0	0	48	3	9
Miners' Association, Ross (Moye and Son)	15	10	0	6	10	6
Westland County (J. Staines)	96	0	0	4	10	0
Westland County (O'Brien and Glynn)	40	0	0	36	10	6
Upper Moutere Road Board	40	0	0	1	16	0
Buller County (Mohan and party)	220	0	0	71	8	6
Buller County (Gardiner and McKay)	56	0	0	24	0	0
Buller County (Negri and others)	43	0	0	29	1	3
Buller County (Scarlett and McHarrie)	39	0	0	18	0	0
Kumara Miners' Association (Scatterini and Anderson)	124	0	0	6	13	6
Kumara Miners' Association (Henley and party)	58	14	0	2	8	0
Kumara Miners' Association (M. Manton)	57	10	0	3	18	9
Kumara Miners' Association (Rogers and Block)	75	0	0	35	6	6
Frying-pan Tail-race	600	0	0	161	11	3
Prospecting Association, Mokihinui (French and others)	58	10	0	11	5	0
Prospecting Association, Westport	432	6	0	197	9	0
Dyer and party, Kuaotunu	120	0	0	37	16	0
Gillam's Gully Prospecting Association (Bramhall and party)	60	0	0	12	3	0
Miners' Association, Riverton	100	0	0	32	0	0
Kennedy-Waikaia Miners' Association, Invercargill	100	0	0	9	0	0
Inangahua District Miners' Association	100	0	0	25	17	6
New El Dorado Sluicing Company, Fat Boys, Criffel	300	0	0	94	4	9
Miners' Association, Greenstone (O'Donnell and party, and J. Pope)	75	0	0	30	4	3
Miners' Association, Tinkers, prospecting Matakanui	6	0	0	3	0	0
Chatterbox Tunnel (G. Clapton)	6	0	0	2	17	9
Port Charles Prospecting Association	20	0	0	11	8	0
Miners' Association, Lake Mapourika	17	4	0	7	13	3
Pitchers and Kitto, Anderson's Flat	100	0	0	20	5	11
Miners' Association, Nelson Creek (Kelly and party)	23	5	0	9	18	0
South British Prospecting Association, Lyell	135	0	0	6	15	0
Miners' Association, Ross (A. Zala)	69	0	0	69	0	0
Miners' Association, Ross (McKay and Muir)	39	0	0	39	0	0
Miners' Association, Ross (McKay and Brown)	13	0	0	13	0	0
Miners' Association, Ross (McEwen and McEchnie)	26	0	0	26	0	0
Miners' Association, Ross (C. Porter)	226	0	0	128	0	0
Miners' Association, Riverton	18	0	0	18	0	0
Katikati Prospecting Association	52	0	0	26	0	0
Cornwall, Walker, and party's tunnel, Boatman's	302	10	0	154	14	0
Miners' Association, Greenstone (Crawford and party)	109	7	6	109	7	6
Mararoa Mining Association	18	0	0	18	0	0
Hororata Prospecting Association	30	15	0	30	15	0

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LIST of WORKS on GOLDFIELDS, &c.—*continued*.

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
AIDS TO PROSPECTING—*continued*.	£	s.	d.	£	s.	d.
Paparata Road Board (Parker and Piggott)	32	10	0	32	10	0
New Bay of Islands Coal Company, prospecting Moody's Outcrop	200	0	0	173	4	3
Longwood Sluicing Company	300	0	0	150	0	0
Red Jack's Miners' Association (Drummond and McDonough)	28	0	0	28	0	0
Kapanga Gold-mining Company (Limited)	20,600	0	0	1,735	3	11
Kuaotunu Prospecting Association	48	10	0	26	0	0
Te Aroha Town Board	100	0	0	37	17	6
Bombay Prospecting Association	40	0	0	16	7	9
Charleston Miners' Association	110	0	0	33	8	6
Buller County (Reaney and Rasmussen)	120	0	0	30	0	0
Buller County (Samuel and party)	100	0	0	5	0	0
Gold-mining League, Westport (McFarlane and others)	39	0	0	13	10	0
Inangahua County (Gabriel and party)	100	0	0	11	11	0
Miners' Association, Dillmanstown (Black and party)	31	10	0	12	0	0
Tapanui Prospecting Association	40	0	0	18	10	0
Miners' Association, Lowburn (Tilliman and party)	57	10	0	42	9	9
Miners' Association, Upper Waikaia	19	10	0	13	0	0
Main and party's tunnel, Kanieri	200	0	0	188	7	0
Ryan and Son's tunnel, Dillmanstown	42	0	0	21	12	0
R. A. Harcourt's tunnel, Blue Spur	180	0	0	90	0	0
Miners' Association, Ross (Archer and Horseby)	13	0	0	13	0	0
Inangahua County (R. Lees)	2	10	0	2	10	0
Westland County (Rebay and party)	112	0	0	56	0	0
Red Jack's Miners' Association (Drummond and Raynor)	24	0	0	12	0	0
Westland County (McGoveran and party)	50	0	0	37	10	0
Westland County (N. Johnson's tunnel, Fox's Flat)	140	0	0	59	0	5
Miners' Association, Ross (Gagliardi and Son)	70	0	0	17	10	0
Miners' Association, Ross (Marchesi and Scott)	200	0	0	153	15	0
Miners' Association, Greenstone (Dickson and party)	72	0	0	15	18	0
Westland County (Patrick and Moynihan)	86	0	0	45	0	0
Westland County (Ryan and Son)	120	0	0	60	0	0
Westland County, prospecting, Kanieri (£1 for £1)	1,228	15	0	614	7	6
Westland County (Dwyer and party, Blue Spur)	800	0	0	758	6	0
Miners' Association, Waiho (Batson and Snow)	9	0	0	9	0	0
Miners' Association, Nelson Creek (Coll and Moran)	160	0	0	160	0	0
Miners' Association, Nelson Creek (Hurley and party)	164	0	0	82	0	0
Miners' Association, Blackball (Keenan and Falconer)	5	17	0	5	17	0
Miners' Association, Blackball (McKenzie and O'Brien)	43	10	0	43	10	0
Miners' Association, Ross (McLeod and Dunlop)	63	14	6	40	8	6
Miners' Association, Ross (Smith and Regan)	164	2	0	164	2	0
Miners' Association, Greenstone (Candy, Roberts, and Evans)	100	0	0	60	8	6
Buller County (Jeffreys and Walker)	8	0	0	8	0	0
Buller County (Christmas and party)	4	15	0	4	15	0
Buller County (Burkitt and party)	13	0	0	13	0	0
Buller County (Stewart and party)	12	0	0	12	0	0
Buller County (Robertson and Saugwell)	26	0	0	26	0	0
Buller County (Ramsey and O'Connor)	4	15	0	4	15	0
Buller County (Clough and McGonagle)	8	0	0	8	0	0
Buller County (Negri and others)	12	0	0	12	0	0
Buller County (Quinn and party)	34	0	0	18	0	0
Buller County (Murray and Forsyth)	9	0	0	9	0	0
Buller County (Salter and party)	6	10	0	6	10	0
Inangahua County (Z. E. Curnow)	6	10	0	4	15	0
Culley and Hislop, prospecting, Kawakawa	125	0	0	125	0	0
Prospecting Association (Riverton)	25	0	0	25	0	0
Tuapeka County (Gabriel's Gully)	400	0	0	223	10	10
Nobel, Stenhouse, and Crawford's tunnel, New Chum Creek	240	0	0	240	0	0
Holmes and party's tunnel, Tucker's Flat	400	0	0	208	8	0
Deep Levels, Kumara	3,269	0	0	1,197	10	4
Miners' Association, Ross (Moye and Son)	60	0	0	14	19	6
Miners' Association, Ross (Paterson and McGowan)	26	0	0	13	0	0
Miners' Association, Waiho (Nelly and Murray)	26	0	0	12	0	0
Miners' Association, Red Jacks (Drummond and party)	50	0	0	24	0	0
Westland County (Roseveri and party)	160	0	0	80	0	0
Prospecting Mokihinui Mine (Lomas and party)	500	0	0	250	0	0
Towai-Hukerenui Coal Syndicate	200	0	0	35	2	0
Ohinemuri County (P. Prudence)	6	0	0	1	4	0
Westland County (Irwin and party)	100	0	0	35	0	0
Buller County (Brand and party)	80	0	0	74	14	3
Miners' Association, Havelock (Kearns and McCusker)	100	0	0	76	0	0
Westland County (Patrick and Moynihan)	300	0	0	195	5	0
Greymouth Harbour Board (boring for coal)	500	0	0	250	0	6
Westland County (Beroz and Mills)	200	0	0	155	0	0
Ohinemuri County (Scanlon and Eyre)	32	0	0	16	0	0
Ross Borough Council (Smith and party)	70	0	0	35	0	0
Johnston, Bryan, and party's tunnel	305	0	0	305	0	0
Blackwater Miners' Association (Banman Bros.)	81	0	0	81	0	0
Inangahua County (P. Tangney)	2	5	0	2	5	0
Westland County (G. McArthur)	6	10	0	3	10	0
Westland County (Rebay and Rebustitti)	80	0	0	40	0	0
Westland County (Ryan and Son)	80	0	0	38	15	0
Westland County (W. Roblofski and party)	150	0	0	75	0	0

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List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
	£ s. d.	£ s. d.
Aids to Prospecting—continued.		
Westland County (Singer and party)	19 10 0	19 10 0
Westland County (Smith and party)	18 0 0	12 0 0
Golden Basin Prospecting Association	435 0 0	146 6 0
Miners' Association, Charleston	110 0 0	58 2 3
Miners' Association, Nelson Creek (Kelly and party)	110 0 0	29 15 9
Ohinemuri County (Scanlon and Eyre)	46 0 0	23 0 0
Buller County (Glass-eye Creek)	26 0 0	13 0 0
Coromandel County, Tunnel Whakaroa Creek	60 0 0	30 0 0
Miner's Association, Kanieri (McQuilkin and party)	30 0 0	11 5 0
Westland County (Harvey and McDonald)	12 0 0	12 0 0
Coromandel County (A. Kelso)	60 0 0	60 0 0
Coromandel County (New Hero Syndicate)	60 0 0	30 0 0
Coromandel County (Dyer and O'Keefe)	25 10 0	12 15 0
Coromandel County (Hosie and Marshall)	21 0 0	10 10 0
Coromandel County (Little Hero Tunnel)	50 0 0	25 0 0
Coromandel County (C. Blasch)	36 0 0	18 0 0
Coromandel County (J. Hickey)	45 0 0	22 10 0
Coromandel County (Horne and McIsaac)	12 0 0	6 0 0
Blackwater Miners' Association (O'Flaherty and Lawrence)	160 0 0	80 0 0
Kumara Miners' Association	25 0 0	12 11 6
Westland County (R. A. Harcourt)	200 0 0	99 10 0
Westland County (G. L. Tacon)	24 0 0	12 0 0
Westland County (Warren and party)	120 0 0	60 0 0
Gill and McDonald shaft (Rock and Pillar)	25 0 0	9 6 6
Kanieri Miners' Association (Singer and Harvey)	40 0 0	26 8 0
Buller County (Gardner and Bettsman)	90 0 0	22 10 0
Westland County (Holst and party)	80 0 0	31 12 9
Contingencies	217 5 8	217 5 8
	76,847 7 10	29,006 11 6
Water-races.		
Water-main, Bull's Battery	350 0 0	100 0 0
Round Hill Water-race	200 19 0	133 19 4
Tomkiss's Water-race	100 0 0	100 0 0
Cardrona Sludge-channel	100 0 0	50 0 0
New water-mains, Thames Water-race	1,479 10 4	739 15 2
Nelson Creek	957 16 9	957 16 9
Mikonui Water-race	14,279 16 4	14,279 16 4
Brown and party, Kumara	90 0 0	22 10 0
Randall Creek Water-race	222 2 3	222 2 3
Thames Water-race	1,250 0 0	1,250 0 0
Contingencies	659 12 8	659 12 8
Randall Creek Water-race	100 15 0	100 15 0
Quinn's Creek Water-race	70 0 0	70 0 0
Survey, water-race, Ninety-mile Beach	65 6 7	65 6 7
Improving water-supply, Oamaru	1,250 0 0	1,150 7 2
Roaring Meg Water-race (Jones, Baxter, and party)	1,600 0 0	800 0 0
Sulky Gully Water-race	504 0 0	218 0 0
Gentle Annie Creek, Mata (R. Kelly)	200 0 0	40 0 0
Purchase Byrne, O'Hallahan, and Murdoch's water rights	35 0 0	35 0 0
Argyle Water-race	8,453 15 1	8,453 15 1
Bell Hill Sluicing Company	1,000 0 0	500 0 0
Finlay and McLiver's Water-race, at Meeletown	400 0 0	34 5 4
Mountain Hut water-race	4,879 12 0	4,879 12 0
Back Creek Water-race survey	690 1 0	350 1 0
	38,878 7 0	35,192 14 8
Drainage and Tailings Channels.		
Drainage-channel, Lawrence (total cost, approximate)	3,000 0 0	2,000 0 0
Subsidy towards purchase of Messrs. Laidlaw and Crawford's freehold in Spotti's Creek, to allow tailings to be deposited (Tinker's Diggings)	500 0 0	400 0 0
Damage by floods, Thames	1,000 0 0	500 0 0
Sludge-channel, Smith's Gully, Bannockburn	1,000 0 0	251 1 0
Round Hill Sludge-channel survey	52 19 7	52 19 7
Compensation to J. Costello, damage done by tailings	788 0 0	788 0 0
Long Gully Sludge-channel	150 0 0	100 0 0
New Pipeclay Gully Sludge-channel	4,547 18 0	773 19 0
Kumara Sludge-channel No. 2	2,762 17 2	2,762 17 2
Ophir Tail-race	2,300 0 0	1,150 0 0
Lawrence Drainage-channel	1,150 0 0	1,092 9 0
Tailings-outlet, Maerewhenua	1,595 4 0	1,595 4 0
Ross Sludge and Storm-water Channel	1,675 10 6	1,675 10 6
Kuaotunu Sludge-channel (£1 for £1)	400 0 0	200 0 0
Branch tail-race to No. 4 Channel	100 0 0	100 0 0
Rimu Drainage-channel	500 0 0	191 19 6
Kumara Sludge-channel No. 4	1,200 0 0	1,151 10 8
Donnelly's Creek Tail-race	1,657 0 0	444 4 5
Muddy Creek Channel	2,000 0 0	1,000 0 0
Drain, Te Aroha West	200 0 0	61 0 0
Kumara Sludge-channel No. 5 and extension	5,654 15 11	5,654 15 11
Waimumu Main Tail-race	3,502 13 5	1,339 13 0
Compensation, Owen Roberts	75 0 0	75 0 0
Kumara Sludge-channel No. 3 extension	570 15 0	570 15 0
Charlton Main Tail-race	1,362 17 7	408 7 1
	37,745 11 2	24,339 5 10
Aid towards the Treatment of Ores.		
Testing-plant, School of Mines, Thames	1,200 0 0	600 0 0
Testing minerals, Dunedin Exhibition	192 8 9	142 8 9
Testing-battery, Mercury Bay	915 1 4	915 1 4
Public crushing-plant (Coromandel School of Mines)	906 0 5	906 0 5
	3,213 10 6	2,563 10 6

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List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
Aid towards Construction of Telephone-lines.	£ s. d.	£ s. d.
Bannockburn to Nevis	60 0 0	50 0 0
Water-conservation on Goldfields.		
Reports on Drainage, Ross Flat	284 10 8	284 10 8
Coromandel Harbour and Kuaotunu Sludge-channels	80 12 6	80 12 6
Eweburn Reservoir	16,459 15 10	16,459 15 10
Mackeytown Water-supply	351 0 0	351 0 0
Waitekauri Water-supply	445 2 5	445 2 5
Karangahake Water-supply	607 6 5	607 6 5
Clyde Water-supply	1,121 13 2	1,121 13 2
Home Gully Dam	1,028 0 6	1,028 0 6
Thames Drainage Board (contribution)	1,000 0 0	1,000 0 0
Alexandra Water-supply	600 0 0	600 0 0
	21,978 1 6	21,978 1 6
Works wholly constructed by Mines Department.		
Construction of road, Arrowtown to Macetown	9,270 6 8	9,270 6 8
Road to open up Woodstock Goldfield	1,000 0 0	1,000 0 0
Ahaura to Amuri	2,504 19 7	2,504 19 7
Waikaia Bush Road	1,000 0 0	1,000 0 0
Waitahuna Bridge	750 0 0	750 0 0
Merrivale tracks	500 0 0	500 0 0
Mokihinui to Specimen Creek	1,238 7 5	1,238 7 5
Wilberforce Quartz-reef Road	1,830 17 7	1,830 17 7
Opening Mokau River	552 8 0	552 8 0
Lyell to Mokihinui	5,098 8 6	5,098 8 6
Brighton to Seventeen-mile Beach	1,789 7 2	1,789 7 2
Wangapeka to Karamea	2,000 0 0	2,000 0 0
Hatter's Terrace to Bell Hill	500 0 0	500 0 0
Cedar Creek Road	3,000 0 0	3,000 0 0
Owen Valley Road	2,208 9 2	2,208 9 2
Cobden to Seventeen-mile Beach	3,036 1 4	3,036 1 4
Cedar Creek Road	1,500 0 0	1,500 0 0
Bridle-track to Upper Anatoki	722 8 0	722 8 0
Whangamata Road	141 10 6	141 10 6
Karangahake through Gorge	1,000 0 0	1,000 0 0
Arthur's Point to Skipper's	12,167 4 1	12,167 4 1
Tracks to Coal Island	54 6 3	54 6 3
Grey Valley to Teremakau	900 0 0	900 0 0
Rimu to New Rush	829 17 9	829 17 9
Tapu to Waikawau	750 10 0	750 10 0
Puhipuhi Road	1,396 17 9	1,396 17 9
Jackson's Bay to Cascade and Gorge River district	5,310 10 11	5,310 10 11
Improving roads and tracks, Collingwood to Takaka and Motueka	10,905 8 11	10,905 8 11
Tramway from New Find to Waitekauri	100 0 0	100 0 0
Havelock–Mahakipawa Dray-road	1,311 9 0	1,311 9 0
Mokihinui to Wanganui	200 0 0	200 0 0
Burnett's Face to Coalbrookdale	200 0 0	200 0 0
Deadman's to Christmas Terrace	20 0 0	20 0 0
Low-level Alpine Claim, Lyell	80 0 0	80 0 0
Bowen Road to Salt-water Beach	60 0 0	60 0 0
Repairing damage done by floods, Westland County	100 0 0	100 0 0
Deviation of road at Kanieri Forks	140 0 0	140 0 0
Road up Dart River	200 0 0	200 0 0
Kuaotunu to Mercury Bay	350 0 0	350 0 0
Thames to Manaia	500 0 0	500 0 0
Cobden to Seventeen-mile Beach	400 0 0	400 0 0
Bridge over Mahinapua Creek	503 16 10	503 16 10
Track up Waiho River	105 0 0	105 0 0
Haast Ferry to Glue-pot	126 0 0	126 0 0
Paeroa–Waihi Road	114 0 0	114 0 0
Waitekauri to New Find	250 0 0	250 0 0
Mahakipawa to Waikakaho	183 12 1	183 12 1
Oparara through gorge to gold-workings	150 0 0	150 0 0
Okira Bridge, at Dirty Mary's Creek	100 0 0	100 0 0
Lagoon Bridge	100 0 0	100 0 0
Widening Cape Terrace Road	100 0 0	100 0 0
Deviation, Granville Road	70 0 0	70 0 0
Tucker's Flat Road	247 18 7	247 18 7
Dillman's–Larrikin's Road	125 15 0	125 15 0
Track at Kanieri Lake and McIntosh Falls, Lake Mahinapua	195 4 6	195 4 6
Extension of road, Rimu to Shallow Rush	150 0 0	150 0 0
Gillam's Gully Track	149 16 0	149 16 0
McKay's Creek, Kokatahi Track	100 0 0	100 0 0
Aorere Valley to Karamea and Mokihinui	29,938 1 2	29,938 1 2
Arrowtown to Macetown	450 0 0	450 0 0
Nelson Creek Bridge	100 0 0	100 0 0
Cascade to Barn Bay Road	411 7 0	411 7 0
Repairs to decking, Tapu Wharf	100 0 0	100 0 0
Waitekauri Battery from Junction–Waihi Road	150 0 0	150 0 0
Deep Creek, Wakamarina, to Empire City Company's claim	50 0 0	50 0 0
Track to diggings at Cape Foulwind	497 11 0	497 11 0
Bridge over Fox's River at Brighton	100 0 0	100 0 0
Totara Bridge	255 0 0	255 0 0
Road from Mokihinui Bridge to gold-workings	75 0 0	75 0 0

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LIST of WORKS on GOLDFIELDS, &c.—*continued*.

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
WORKS WHOLLY CONSTRUCTED BY MINES DEPARTMENT—*continued*.	£	s.	d.	£	s.	d.
Clearing two miles of old track from right-hand branch of Kanieri River to Gentle Annie Terrace	13	0	0	13	0	0
Extending horse-track to Blackball Creek	500	0	0	500	0	0
Matawai to Kaimarama	150	0	0	150	0	0
Tiki to Mahakirau	250	0	0	250	0	0
Karangahake Gorge to Waihi	350	0	0	350	0	0
Upper Tararu Road	471	10	3	471	10	3
Red Hill Road	249	8	1	249	8	1
Repairs, Nile Bridge	1,131	2	6	1,131	2	6
Miller's Flat to Skipper's	580	0	0	580	0	0
Cobden to Coal Creek	375	0	0	375	0	0
Track to New Find, Tairua	47	11	6	47	11	6
Cedar Creek Dray-road	466	11	2	466	11	2
Road to Matarangi Goldfield	75	0	0	75	0	0
Repairs, Manaia Track	90	0	0	90	0	0
Upper Township School Bridge	50	0	0	50	0	0
Tiki Bridge across Waiau	256	0	0	256	0	0
Scott's Bridge	175	0	0	175	0	0
Oteau Bridge	150	0	0	150	0	0
Mercury Bay–Kaimarama Road	50	0	0	50	0	0
Stoney Creek Track	15	0	0	15	0	0
Road to mines, Waiomo	50	0	0	50	0	0
Upper Hill Track to branch track, Waiorongomai	30	0	0	30	0	0
Canadian Gully Bridge, and repairs to tunnel on horse-grade, Waiorongomai	70	0	0	70	0	0
Waiorongomai Road	100	0	0	100	0	0
Track from Slate River to Rocky	225	0	0	225	0	0
Pack-track to Killdevil	100	0	0	100	0	0
Repairs, Wangapeka Road towards Crow Diggings	153	0	7	153	0	7
Repairing flood-damages, Grey County	370	0	0	370	0	0
Taipo Track to Seven-mile	194	5	8	194	5	8
Repairs, Totara Bridge	336	0	0	336	0	0
Repairs, Kanieri Lake Road	80	0	0	80	0	0
Mercury Bay to Whenuakite and Boat Harbour	150	0	0	150	0	0
Tiki to Gumtown, *viâ* Kaimarama	160	0	0	160	0	0
Driving Creek to Cabbage Bay, and Driving Creek to Cape Colville	660	0	0	660	0	0
Tiki to Waikawau	600	0	0	600	0	0
Paeroa to Te Aroha	365	0	0	365	0	0
Puriri to east side of range	596	19	6	596	19	6
Onamalutu to Wakamarina Forks	400	0	0	400	0	0
Waimangaroa to Denniston	100	0	0	100	0	0
Road to Lyell's Creek Extended Company's tunnel	200	0	0	200	0	0
Jackson's Bay to Cascade	1,110	8	1	1,110	8	1
Bridge over Ogilvie's Creek	150	0	0	150	0	0
Gillam's Gully Track	220	0	0	220	0	0
Bridge over Kanieri River at Kokatahi	467	10	10	467	10	10
Road to Oparara Diggings	100	0	0	100	0	0
Millerton Road	249	0	3	249	0	3
Waiau to Preservation Inlet	7,961	19	6	7,961	19	6
Hatter's Terrace to Haupiri	1,650	0	0	1,650	0	0
Grey River to Moonlight	530	0	0	530	0	0
Blackball Track	1,185	12	5	1,185	12	5
Ahaura–Kopara Road	400	0	0	400	0	0
Mackley's to Waipuna Terrace	100	0	0	100	0	0
Footbridge over Blackball Creek	150	0	0	150	0	0
Waipapa to Waikawa	200	0	0	200	0	0
Waipapa to Six-mile	100	0	0	100	0	0
Drain at Adamson's	50	0	0	50	0	0
Maruia Track, between Reefton and Maruia	50	0	0	50	0	0
Sledge-track to Langdon Reefs	30	0	0	30	0	0
Track to Blackball Township, repairs	40	0	0	40	0	0
Track, Old Man Range	50	0	0	50	0	0
Road to gold discovery near Blue Spur	45	0	0	45	0	0
Bartlett's Creek Track	200	0	0	200	0	0
Prospecting-track, Brunnerton to Paparoa	125	0	0	125	0	0
Extension Seddon's Terrace Track to new claim	208	10	6	208	10	6
West Tokatea Road	50	0	0	50	0	0
Waitaia Battery Road	150	0	0	150	0	0
Preece's Point Road	150	0	0	150	0	0
Tokatea–Kennedy Bay Road	100	0	0	100	0	0
Main Cabbage Bay Road	50	0	0	50	0	0
Hooker's to Mercury Bay	100	0	0	100	0	0
Opeto Road	100	0	0	100	0	0
Blagrove's Road	400	0	0	400	0	0
Cemetery–Cabbage Bay Road	100	0	0	100	0	0
Rails for Coromandel Wharf	31	5	0	31	5	0
Culverts, Tiki Road	100	0	0	100	0	0
Soldier's Creek Road	198	5	0	198	5	0
Road to Barrytown	300	0	0	300	0	0
Tracks to western sounds	7,307	17	11	7,307	17	11
Road to R. Kelly's claim, Gentle Annie Creek	100	0	0	100	0	0
Waitekauri to New Find	250	0	0	250	0	0
Paeroa Mill Road	50	0	0	50	0	0
Owharoa to Waitawheta	50	0	0	50	0	0

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List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
Works wholly constructed by Mines Department—*continued.*	£	s.	d.	£	s.	d.
Deviation Road, Earl's Hill	200	0	0	200	0	0
Waihi to Katikati	75	0	0	75	0	0
Bridge over Slate River	50	0	0	50	0	0
Pack-track to Glover's Flat, Lower Anatoki	50	0	0	50	0	0
Clearing Karaka Creek of flood-damage	50	0	0	50	0	0
Track up right-hand branch of Cullen's Creek	25	0	0	25	0	0
Footbridge, Waimangaroa River	50	0	0	50	0	0
Track up Callary Branch, Waiho River	70	0	0	70	0	0
Converting Wilson's Lead Track, Addison's, into a dray-road	400	0	0	400	0	0
Cabbage Bay to mines	400	0	0	400	0	0
Coromandel to Kuaotunu	2,070	0	0	2,070	0	0
Manaia to mines	100	0	0	100	0	0
Whitianga to Mahakirau	300	0	0	300	0	0
Whangapoua Mill Road	100	0	0	100	0	0
Kuaotunu Bridge	200	0	0	200	0	0
Granity Creek to Ngakawau	100	0	0	100	0	0
Crow Diggings Track	527	8	2	527	8	2
Road to diggings, Cape Foulwind	100	0	0	100	0	0
Ngahere to Blackball	600	0	0	600	0	0
Fencing land, Blackball Road	110	0	0	110	0	0
Prospecting-track, Greek's Gully to Kanieri Forks	150	0	0	150	0	0
Repairing Jones's Creek and Donohue's Storm-channels	100	0	0	100	0	0
Deviation, Pleasant Creek Track	130	0	0	130	0	0
Road-works at Ohaeawai	500	0	0	500	0	0
Mahakirau Creek Road	200	0	0	200	0	0
Puriri to mines	100	0	0	100	0	0
Katikati–Waihi Road	150	0	0	150	0	0
Pack-track from Kerikeri	50	0	0	50	0	0
Track to Waitakohe Goldfield	50	0	0	50	0	0
Repairing bridges to mines, Te Puke	250	0	0	250	0	0
Helena Bay to Whakapara Railway-station	100	0	0	100	0	0
Gordon Settlement to Waharoa	600	0	0	600	0	0
Waiorongomai Road	300	0	0	300	0	0
Approach to railway-bridge, Te Aroha	150	0	0	150	0	0
Upper Waitekauri Bridge	250	0	0	250	0	0
Junction Waihi Road to New Find, Waitekauri	328	8	0	328	8	0
Repairing bridges, Doctor's and Staunton's Creeks	200	0	0	200	0	0
Four-mile Bridge	100	0	0	100	0	0
Fox's Bridge	100	0	0	100	0	0
Charleston–Nine-mile Beach	200	0	0	200	0	0
Road, Promised Land–Karamea	550	0	0	550	0	0
Karamea Bridge and approaches	8,565	19	8	8,565	19	8
Approaches, Matakitaki Bridge	279	15	0	279	15	0
Snowy Creek Bridge	300	0	0	300	0	0
Big River Road	4,571	0	0	4,571	0	0
Footbridge across by-wash, Ngahere–Blackball Ferry	210	0	0	210	0	0
Track to Healey's Gully	90	0	0	90	0	0
Track, Lancashire Flat to head of Clearwater Creek	50	0	0	50	0	0
Granville Road	100	0	0	100	0	0
Footbridges, Blackwater and Greenstone	300	0	0	300	0	0
Brown's Terrace to Arnold	200	0	0	200	0	0
Protective works, main Grey Bridge	191	0	0	191	0	0
Extension, Tucker's Flat Road	103	2	6	103	2	6
Butcher's Creek Bridge, Kanieri Lake Road	129	17	6	129	17	6
Kapitea Creek Bridge, Lamplough Track	118	0	0	118	0	0
Widening Milltown Track to Humphrey's Gully	600	0	0	600	0	0
Pack-track, Seddon's Terrace to Eel Creek	246	17	6	246	17	6
New bridge, Kapitea Creek, Loop-line Road	30	8	7	30	8	7
Stribbing's Creek Bridge	70	8	11	70	8	11
Widening Seddon's Terrace Road extension	199	0	0	199	0	0
Compensation, Larrikin's Road	56	0	0	56	0	0
Garston to Nevis	1,965	17	2	1,965	17	2
Nevis Valley Road	400	0	0	400	0	0
Okarito River Bridge	300	0	0	300	0	0
Drainage, Stafford Township	399	17	5	399	17	5
Wangapeka Track, Rolling River–Kiwi Creek	149	19	10	149	19	10
Tracks, Stewart Island	718	7	8	718	7	8
Widening Lake Mapourika–Waiho Road	782	6	8	782	6	8
Roads, Great Barrier	604	4	2	604	4	2
Riversdale–Waikaia	200	0	0	200	0	0
Prospecting-track, Lvell–Larry's	100	0	0	100	0	0
Track to New Find, Victoria Range	500	0	0	500	0	0
Extending road into bush, Addison's	100	0	0	100	0	0
Clearing rocks and easing curves, Nine- and Ten-mile Bluffs	129	6	11	129	6	11
Repairs flood-damages, South Westland	100	0	0	100	0	0
Hungerford's Bridge	444	11	5	444	11	5
Waitangi Bluff Track	99	18	9	99	18	9
Track from Cedar Creek Road to Ford and Thompson's claim	20	0	0	20	0	0
Repairs Mount Greenland Track	50	0	0	50	0	0
Ross Road, towards Ranges	199	12	6	199	12	6
Repairs pack-track, Cedar Creek	100	0	0	100	0	0
Kinsella's land, taken for Blackball Road	5	11	0	5	11	0
Maratoto to mines	149	5	6	149	5	6

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LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
WORKS WHOLLY CONSTRUCTED BY MINES DEPARTMENT—*continued.*	£	s.	d.	£	s.	d.
Hatter's Terrace–Haupiri	200	0	0	200	0	0
Upper Waiotahi Road	492	10	0	492	10	0
Inland from Omahu	400	0	0	400	0	0
Gannon's to Painkiller	196	10	6	196	10	6
Netherton Road	28	14	6	28	14	6
Repairs, Tapu Creek Road	66	0	0	66	0	0
Repairs, Karaka Creek Road	40	0	0	40	0	0
Gravelling road through Mr. Adams's property	100	0	0	100	0	0
Gravelling Onamalutu Track	100	0	0	100	0	0
Road to Fenian Creek, Karamea	250	0	0	250	0	0
Westport and Mokihinui Railway-line to Jones's Creek	100	0	0	100	0	0
Footbridge, No Town Creek	50	0	0	50	0	0
Wood's Creek Bridge	80	0	0	80	0	0
Maori Creek Bridge	50	0	0	50	0	0
Main South Road to Mikonui Beach	15	15	0	15	15	0
River-protection works, Te Aroha	200	0	0	200	0	0
Drains, Maratoto	100	0	0	100	0	0
Repairs, Mata Bridge	300	0	0	300	0	6
Roads, Tauranga County	1,226	17	5	1,226	17	0
Re-metalling Wakamarina Road	500	0	0	500	0	5
Pakawau Bush Road	425	0	0	425	0	0
Scott's Creek Bridge	170	0	0	170	0	0
Richmond–Collingwood	250	0	0	250	0	0
Deadman's Creek–Christmas Terrace	250	0	0	250	0	0
Denniston–Cascade Creek	100	0	0	100	0	0
Big Totara River Bridge	450	0	0	450	0	0
Little Totara River Bridge	350	0	0	350	0	0
Twins Road	100	0	0	100	0	0
Track up Four-mile and Nile Rivers	250	0	0	250	0	0
Culverts, Devil's Creek	100	0	0	100	0	0
Moonlight–Paparoa	100	0	0	100	0	0
Footbridges, Cobden–Seven-mile Road	342	10	0	342	10	0
Grey River–Moonlight	500	0	0	500	0	0
Bridge, Brandy Jack's Creek	150	0	0	150	0	0
Track up Ten-mile Creek	100	0	0	100	0	0
Road, Cobden to Warren's and Ten-mile Bluff to Barrytown	500	0	0	500	0	0
Cape Terrace Road continuation	150	0	0	150	0	0
Lake Brunner Road to Maori Creek	150	0	0	150	0	0
Hampden to Horse Terrace	3,450	18	6	3,450	18	0
Track to Adamstown	375	4	0	375	4	6
Brunnerton–Paparoa	50	0	0	50	0	0
Waikupakupa Ocean Beach to Main Road	100	8	0	100	8	0
Totara River to Farmer's Creek	194	13	0	194	13	0
Doughboy Road	300	0	0	300	0	0
Widening and repairing Lamplough Track	145	15	0	145	15	0
Extension, Gillam's Gully Track	100	0	0	100	0	0
Adair's Track, Mahinapua Road	150	0	0	150	0	0
Mahinapua and South Terrace Track	250	0	0	250	0	0
Veronica Creek Track	200	0	0	200	0	0
Waipori–Berwick Road	1,976	18	9	1,976	18	0
Roxburgh–Clyde	500	0	0	500	0	9
Orepuki–Block I., Longwood	500	0	0	500	0	0
Tableland horse-track	199	9	3	199	9	0
Landing Creek Bridge	289	16	6	289	16	3
Walker's Creek Bridge	214	12	2	214	12	6
Greenstone–Teremakau	240	0	3	240	0	2
Bell Hill Road	199	9	4	199	9	3
Bridge over Kanieri River	94	5	0	94	5	4
Main South Road to Mikonui Beach	84	15	0	84	15	0
Deviation, Larrikin's Road	1,375	4	2	1,375	4	0
Pine-tree Road	45	10	7	45	10	2
Wire Bridge, German Gully Track	89	19	6	89	19	7
Road formation, Waitekauri to Cross Road	271	11	11	271	11	11
Bridge, Mariposa Battery Road	24	0	0	24	0	0
Crosbie Settlement Road	50	0	0	50	0	0
Waitaia Battery-site to Low Level	50	0	0	50	0	0
Repairs, Tauranga–Te Puke	25	2	6	25	2	6
Rockville–Slate River	51	0	0	51	0	0
Aorere Main Road, gravelling	60	0	0	60	0	0
Ferntown footbridges and gravelling	48	0	0	48	0	0
Swamp Road, Ferntown	30	0	0	30	0	0
Clearing slips, Seventeen-mile Bluff	150	0	0	150	0	0
Clearing slips, Nelson–Grey–Ross Road	115	0	0	115	0	0
Bridges over Raleigh Creek (3)	324	10	0	324	10	0
Hampden Cemetery to Schoolhouse, Murchison	345	1	6	345	1	6
Squaretown Bridge over Little Grey River	75	0	0	75	0	0
Berwick–Waipori, repairs	75	0	0	75	0	0
Beaumont–Miller's Flat	250	0	0	250	0	0
Track to Police-station, Seddonville	37	10	2	37	10	2
Improving track, Sealer's Creek	49	12	8	49	12	8
Kiripaka to Coal-mines	80	0	0	80	0	0
Waiorongomai Road	150	0	0	150	0	0
Tiki–Opitonui	250	0	0	250	0	0
Taumatawahine Bridge	300	0	0	300	0	0
Cemetery Road, Kuaotunu	100	0	0	100	0	0
Tiki–Matawai	45	0	0	45	0	0
Puriri–Tairua	1,135	14	6	1,135	14	6

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List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
Works wholly constructed by Mines Department—*continued.*	£	s.	d.	£	s.	d.
Beach Road, Thames	100	0	0	100	0	0
Puru Creek Road	400	0	0	400	0	0
Tararu Creek Bridge	100	0	0	100	0	0
Turua–Netherton	200	0	0	200	0	0
Te Aroha Bridge	250	0	0	250	0	0
Bartlett's Creek Road	449	4	7	449	4	7
Mount Patriarch Road	200	0	0	200	0	0
Takaka River Footbridge	250	0	0	250	0	0
Karamea Track	250	0	0	250	0	0
Bainham–Upper Aorere	200	0	0	200	0	0
Shaggery Road	100	0	0	100	0	0
Seddonville–Mokihinui	920	0	0	920	0	0
Mokihinui to Reefs, widening	500	0	0	500	0	0
Mokihinui to Wanganui, improving	600	0	0	600	0	0
Lvell–Victoria Range	450	0	0	450	0	0
Nile Saddle–Maori Creek	150	0	0	150	0	0
Seddonville–Cardiff	100	0	0	100	0	0
Painkiller–Murray Creek	844	7	6	844	7	6
Little Grey River Bridge	400	0	0	400	0	0
Improving crossings, Waitahu River and Road, up Kirwan's Creek	450	0	0	450	0	0
Fagan's Creek, Barrytown, to Paparoa	425	0	0	425	0	0
Nelson Creek Bridge	950	0	0	950	0	0
Callaghan's Creek Bridge	250	0	0	250	0	0
Mosquito–Maori Creek	100	0	0	100	0	0
Deviation, Westbrook–Teremakau	450	0	0	450	0	0
Bridge, Cobden–Brunner Road	125	10	0	125	10	0
Moonlight Track, deviation	140	0	0	140	0	0
Totara River to Constitution Hill	123	1	0	123	1	0
Teremakau–Paroa	250	0	0	250	0	0
Back Creek Road, deviation	200	0	0	200	0	0
Blue Spur Creek Bridge	29	8	0	29	8	0
Young Hill Creek Road	150	0	0	150	0	0
Repairs to road between Sections 17 and 45, Waikaka	100	0	0	100	0	0
Skippers–Bullendale	200	0	0	200	0	0
Waugapeka–Wanganui	2,324	17	2	2,324	17	2
Okuru River Ford Track	342	18	8	342	18	8
Gillespie's Bluff Track	151	14	1	151	14	1
Maori River Road	149	19	6	149	19	6
Clifden Bridge, Waiau	1,115	3	0	1,115	3	0
Whangamata Harbour to Wentworth	100	0	0	100	0	0
Waiorongomai–Gordon	150	0	0	150	0	0
Easing grade Kahika Hill	75	0	0	75	0	0
Bartlett's Creek–Cat Point	200	0	0	200	0	0
Bridges, Dead Horse and Walker's Creeks	25	0	0	25	0	0
Black Creek Bridge	75	0	0	75	0	0
Wharton's Dam to Deep Creek	25	0	0	25	0	0
Piano Flat Company's Track	50	0	0	50	0	0
Waikaia–Whitecomb (repairs)	50	0	0	50	0	0
Mangles Bridge	4,323	4	8	4,323	4	8
Karangarua Bridge	448	13	6	448	13	6
Repairs Donnelly's Creek Bridge	440	1	3	440	1	3
Waiau Bridge to Old Mill-site	150	0	0	150	0	0
Donnelly's Bridge	136	10	0	136	10	0
Sullivan's Creek Bridge	164	0	0	164	0	0
Rings Road Bridge	325	0	0	325	0	0
Railway-stations Roads	500	0	0	500	0	0
Matatoke Outfall-drain	100	0	0	100	0	0
Komata Reefs–Paeroa	500	0	0	500	0	0
Grace Darling Road	392	0	0	392	0	0
Komata Creek Road	150	0	0	150	0	0
Waitekauri Creek Bridge	160	0	0	160	0	0
Papamoa–Te Puke	275	0	0	275	0	0
Tauranga–Te Puke	400	0	0	400	0	0
Slate River Road	100	0	0	100	0	0
Motupipi Bridge	100	0	0	100	0	0
Tracks, Wakamarina and Mahakipawa	46	16	6	46	16	6
Promised Land–Ohinemuri Creek	400	0	0	400	0	0
Fairdown to Beach	100	0	0	100	0	0
Paparoa River Track	100	0	0	100	0	0
Capleston–Larry's	415	0	0	415	0	0
Blackball–Paparoa	1,686	10	0	1,686	10	0
Coal Creek Bridge	538	0	0	538	0	0
Totara Flat Road	100	0	0	100	0	0
Dowling Creek Bridge	175	0	0	175	0	0
Granite Creek Bridge	100	0	0	100	0	0
Blackball Road (improvements)	100	0	0	100	0	0
Sunny Bight Track (widening)	200	0	0	200	0	0
Gallery Track and Wire Bridge	400	0	0	400	0	0
Mikonui River approaches	100	0	0	100	0	0
McKay's Creek Bridge	270	12	0	270	12	0
Haast–Blue River Road	100	0	0	100	0	0
Arawata Track	100	0	0	100	0	0
Turnbull and Okuru Rivers Track	100	0	0	100	0	0
Waitahuna–Bruce County boundary	300	0	0	300	0	0
Clyde–Ophir	200	0	0	200	0	0
Nokomai Road	250	0	0	250	0	0
Skipper's–Gallant Tip	100	0	0	100	0	0
Beale's Hill Road deviation	100	0	0	100	0	0

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LIST OF WORKS ON GOLDFIELDS, &c.—*continued*.

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
WORKS WHOLLY CONSTRUCTED BY MINES DEPARTMENT—*continued*	£ s. d.	£ s. d.
Gore-Waikaka	400 0 0	400 0 0
Riversdale-Waikaia	200 0 0	200 0 0
Charlton Road	200 0 0	200 0 0
Orepuki-Shale-works	200 0 0	200 0 0
Havelock-Mahakipawa	191 5 1	191 5 1
Dee Creek Bridge	538 3 10	538 3 10
Cook's River Flat (widening)	396 13 6	396 13 6
Galway-Bluff Track	147 15 10	147 15 10
Kokotahi Road	451 2 5	451 2 5
Donoghue's deviation	229 18 6	229 18 6
Mason's Bay Track	150 9 6	150 9 6
Granity Creek Bridge	431 12 0	431 12 0
Mount Hercules deviation (Great South Road)	1,119 4 6	1,119 4 6
Waitaia Mine to battery	100 0 0	100 0 0
Gumtown Landing to post-office	50 0 0	50 0 0
Repairs, track, Thames Road to McLaughlin's	50 0 0	50 0 0
Maratoto Road	199 13 10	199 13 10
Thames River-Whangamata	200 0 0	200 0 0
Cullensville-Waikakaho	55 0 0	55 0 0
Road to Golden Bar Mine	83 3 6	83 3 6
Tuamarina-Kaituna	184 0 0	184 0 0
Neudorf-Ngatimoti	100 0 0	100 0 0
Graham River Bridge	150 0 0	150 0 0
Takaka Bridge protective works	150 0 0	150 0 0
Takaka Hill Road	150 0 0	150 0 0
Cobden-Barrytown (repairs)	1,572 0 0	1,572 0 0
Brown's Terrace-Kotuku	100 0 0	100 0 0
Blackball footbridge approaches	250 0 0	250 0 0
Twelve-mile Bluff-Fourteen-mile Bluff	100 0 0	100 0 0
Cobden-Point Elizabeth	100 0 0	100 0 0
Nelson Creek-Bell Hill	250 0 0	250 0 0
Big River-Slatey Creek	100 0 0	100 0 0
Big River-St. George	249 14 0	249 14 0
Kanieri River Bridge	30 15 0	30 15 0
Arrow-Matatapu	100 0 0	100 0 0
Bridles Point-Deepwater	100 0 0	100 0 0
Blind Bay-Whangaparapara	844 1 5	844 1 5
Karaka Creek Road	100 0 0	100 0 0
Lower Tairua-Broken Hill	150 0 0	150 0 0
Waitekauri-Wharekiraupunga	98 8 6	98 8 6
Mill Road	200 0 0	200 0 0
Waitekauri-Hill Track	100 0 0	100 0 0
Repairs, Kaituna Bridge	81 3 6	81 3 6
Lloyd's Valley Road bridges	150 0 0	150 0 0
Glenrae-Tadmor	100 0 0	100 0 0
Brooklyn Valley Road	100 0 0	100 0 0
Oparara River Road, Karamea	550 0 0	550 0 0
Bradshaw's Lead Road	200 0 0	200 0 0
Fenian Creek Track	250 0 0	250 0 0
Karamea River Protective Works	200 0 0	200 0 0
Coalbrookdale-Cedar Creek	200 0 0	200 0 0
Nile River Bridge, Charleston	360 0 0	360 0 0
Deadman's Creek, Brighton	150 0 0	150 0 0
Caroline Terrace Road	100 0 0	100 0 0
Mulliky Creek-Karamea	100 0 0	100 0 0
Murray Creek-Waitahu	568 16 6	568 16 6
Black's Point Road (widening)	1,051 3 3	1,051 3 3
Blackball Footbridge (Brunner-Moonlight Road)	520 0 0	520 0 0
Barrytown-Paparoa	200 0 0	200 0 0
Eight-mile Creek Bridge	442 16 10	442 16 10
Granville-Grey River	150 0 0	150 0 0
Middle Branch-Styx River	400 0 0	400 0 0
Kumara Beach Road-Teremakau	976 0 0	976 0 0
Ross Cemetery Road	200 0 0	200 0 0
Table Hill-Canada Reefs	100 0 0	100 0 0
Beaumont-Rankleburn	250 0 0	250 0 0
Clyde-Queenstown	1,100 0 0	1,100 0 0
White's Reef-Fraser Basin	100 0 0	100 0 0
Hawea-Lindis Pass	150 0 0	150 0 0
Alexandra Bridge	750 0 0	750 0 0
Dairy Creek-Coal-pits	88 0 0	88 0 0
Waimumu Claims Road	200 0 0	200 0 0
Croydon dredging claims	200 0 0	200 0 0
Glenary Bridge	400 0 0	400 0 0
Ross Creek Bridge	84 18 11	84 18 11
Wangapeka-Kiwi	381 0 0	381 0 0
Larry's Creek Bridge (extension)	627 11 1	627 11 1
Belgrove-Westport-Reefton	9,393 6 11	9,393 6 11
Glenroy Bridge	916 19 8	916 19 8
Warwick-Maruia Bridge	7 15 6	7 15 6
Stafford-Awatuna	2,329 3 11	2,329 3 11
Stewart Island Road to Mines	219 8 2	219 8 2
Roads, Preservation Inlet	442 16 8	442 16 8
Tracks, Cromarty	216 6 8	216 6 1
Roads, Stewart Island	113 15 1	113 15 7
Lake Hochstetter Track	178 19 7	178 19 3
Ahaura-Haupiri	1,247 18 4	1,247 18 4
Ahaura-Orwell Creek	668 9 3	668 9 1
Deadman's Creek Bridge	147 7 4	147 7 1

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List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
Works wholly constructed by Mines Department—*continued.*	£	s.	d.	£	s.	d.
Saltwater Creek Bridge	105	14	4	105	14	4
Mercury Bay, Hospital Road	50	0	0	50	0	0
Coromandel–Mercury Bay	165	0	0	165	0	0
Omahu–Whangamata Track to Klondike Mine	100	0	0	100	0	0
Rocky Point Road	50	0	0	50	0	0
Waitekauri Hill Track	5	0	0	5	0	0
Golden Cross Road (repairs)	34	14	6	34	14	6
Protective works, Main Road, Karangahake	94	18	8	94	18	8
Karangahake–Rotokohu	307	10	0	307	10	0
Aorere River Bridge (repairs)	100	0	0	100	0	0
Burning coal-seam, Boatman's	69	10	0	69	10	0
Paroa–Teremakau	200	0	0	200	0	0
Doolan's Coal-pit Road	300	0	0	300	0	0
Ahaura Bridge	3,314	14	3	3,314	14	3
Orwell Creek Bridge	185	12	2	185	12	2
Dredging Titri Canal	12	0	0	12	0	0
Whakapara–Puhipuhi	585	0	0	585	0	0
Macaronic Mine Road	200	0	0	200	0	0
Owera Bridge	350	0	0	350	0	0
Driving Creek School Bridge	200	0	0	200	0	0
Matatoki Road	467	10	0	467	10	0
Wharepoa Settlement Road	1,059	1	5	1,059	1	5
Crosbie Settlement Road	100	0	0	100	0	0
Peel's Creek Road	100	0	0	100	0	0
Karangahake Track extension	105	0	0	105	0	0
Waihi–Tauranga	197	3	4	197	3	4
Mangakara Creek Bridge	150	0	0	150	0	0
Karangahake–Mangakara	132	7	10	132	7	10
Protecting Bridge, Waitapu	200	0	0	200	0	0
Milnthorpe Road	200	0	0	200	0	0
Pakawau–Puponga	100	0	0	100	0	0
Chandler's–Wangapeka Junction	200	0	0	200	0	0
Chandler's–Rolling River	200	0	0	200	0	0
Tableland Track	40	0	0	40	0	0
Lyell–Eight-mile (widening)	750	0	0	750	0	0
Canaan Road	250	18	8	250	18	8
Addison's Road	100	0	0	100	0	0
Virgin Flat Road	100	0	0	100	0	0
Blackwater Track	200	0	0	200	0	0
Welshman's Terrace Track	200	0	0	200	0	0
Fairdown–Waimangaroa	350	0	0	350	0	0
Coal Creek Extension	200	0	0	200	0	0
Warwick–Maruia Bridge	198	2	10	198	2	10
Fairdown Station–Waimangaroa (widening)	300	0	0	300	0	0
Just-in-Time Track	300	0	0	300	0	0
Road to Matakitaki River Bridge	200	0	0	200	0	0
Glenroy River Road	300	0	0	300	0	0
Waipuna Road	925	0	0	925	0	0
Cape Terrace Road	400	0	0	400	0	0
Hatter's Terrace–Bell Hill	500	0	0	500	0	0
Nelson Creek Bridge, Grey–Marsden Road	100	0	0	100	0	0
Nelson Creek Bridge–Hatter's Terrace	200	0	0	200	0	0
Maori Creek Bridge	100	0	0	100	0	0
Eight-mile Creek Bridge Approaches	130	0	0	130	0	0
Moonlight Road	250	0	0	250	0	0
Kokatahi Road	255	0	0	255	0	0
Doughboy Road	210	2	9	210	2	9
Humphrey's–One Mile	238	8	6	238	8	6
Milltown Track Deviation	342	15	0	342	15	0
Lamplough Track	257	0	0	257	0	0
Blue Spur Road Bridge	50	0	0	50	0	0
Tucker Flat Road	88	15	9	88	15	9
Three-mile Bluff–Okarito	150	0	0	150	0	0
Metalling Awatuna Road	100	0	0	100	0	0
Johnston's Creek Road Extension	450	0	0	450	0	0
Waimumu Road	300	0	0	300	0	0
Stoney Ford Bridge–Nokomai	300	0	0	300	0	0
Waikaia Goldfield Road	150	0	0	150	0	0
Waikaia–Whitecomb	100	0	0	100	0	0
Parrawa–Nokomai Bridge	250	0	0	250	0	0
Stewart Island Road to Mines	311	7	6	311	7	6
Karamea Bridge (rebuilding)	4,044	6	4	4,044	6	4
Westport–Waimangaroa	1,045	0	1	1,045	0	1
Waipuna Bridge	260	12	10	260	12	10
Boatman's Creek Bridge	3	19	0	3	19	0
Sawyer's Creek Bridge	246	17	8	246	17	8
Potts' Creek Bridge	330	0	9	330	0	9
Opitonui Footbridge	90	0	0	90	0	0
Gumtown Road	824	0	0	824	0	0
Paeroa–Waihi	570	0	0	570	0	0
Komata Drain	100	0	0	100	0	0
Thompson's Track	4,723	19	11	4,723	19	11
Waihi–Katikati	2,199	16	0	2,199	16	0
Caledonian Terrace Track	100	0	0	100	0	0
Boatman's Valley Road Bridge	435	0	0	435	0	0
Repairs Kaituna Bridge	68	16	6	68	16	6
Approaches Moonlight Bridge	35	0	0	35	0	0
Repairs Upper Callary Track	50	0	0	50	0	0
Lower Ford Track, Wataroa	50	0	0	50	0	0

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LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
WORKS WHOLLY CONSTRUCTED BY MINES DEPARTMENT—*continued.*	£ s. d.	£ s. d.
Humphrey's Road	18 16 6	18 16 6
Gillam's Gully Track	799 19 7	799 19 7
Back Creek Road and Bridge	99 18 1	99 18 1
Milltown Road	58 15 6	58 15 6
Tucker Flat Road	11 4 8	11 4 8
Clarendon–Berwick	400 0 0	400 0 0
Repairs Great South Road	100 0 0	100 0 0
Campion's Road	150 0 0	150 0 0
Garvie Burn Road	100 0 0	100 0 0
Mataura River Bridge repairs	50 0 0	50 0 0
Edge's Coal-pit Road	150 0 0	150 0 0
Burke's Creek Bridge	245 8 0	245 8 0
Big Ohika Creek Bridge	886 7 4	886 7 4
Prospecting-tracks, Rimu	75 0 0	75 0 0
Tokatea–Kennedy Bay	1,085 0 0	1,085 0 0
Waiwawa River Bridge	500 0 0	500 0 0
McColl's Creek Bridge	100 0 0	100 0 0
Driving Creek–Tokatea	200 0 0	200 0 0
Opitonui–Mercury Bay	200 0 0	200 0 0
Bridge and approaches, Waitaia Mine Road	100 0 0	100 0 0
Swamp Creek Bridge	100 0 0	100 0 0
Whangamata–Wentworth	440 0 0	440 0 0
Upper Tairua Bridge	250 0 0	250 0 0
Kaueranga Suspension-bridge	250 18 4	250 18 4
Komata Reefs–Waitekauri	405 0 0	405 0 0
Hikutaia–Waitekauri	1,095 0 0	1,095 0 0
Grace Darling Road	47 8 9	47 8 9
Tui Mine Track	599 14 0	599 14 0
Karangahake Mountain-track	186 0 0	186 0 0
Dividing Range Track	225 0 0	225 0 0
Karangahake Hill Track	210 0 0	210 0 0
Waitekauri Hill Track	100 0 0	100 0 0
Te Aroha–Karangahake–Waitawheta	199 14 0	199 14 0
Havelock–Tuamarina	679 0 0	679 0 0
Cullensville Road and track	50 0 0	50 0 0
Bonny Doon Road	1,785 17 7	1,785 17 7
Kaituna–Ferntown	300 0 0	300 0 0
Taitapu boundary Track	200 0 0	200 0 0
Bainham Bridge	578 10 0	578 10 0
Slate River road	200 0 0	200 0 0
Thorpe–Churchill	300 0 0	300 0 0
Shaggery Road	200 0 0	200 0 0
Motueka Valley–Baton	200 0 0	200 0 0
Stanley Brook Bridge	300 0 0	300 0 0
Lyell Bridge–Ryan's	1,100 0 0	1,100 0 0
Costello's Hill Road	1,050 0 0	1,050 0 0
Addison's Road–Buller Road	1,250 0 0	1,250 0 0
Mokihinui end of Westport Road	1,050 0 0	1,050 0 0
Fairdown to Beach	200 0 0	200 0 0
Charleston–Brighton	400 0 0	400 0 0
Waimangaroa–Birchfield	600 0 0	600 0 0
Lyell–Denniston Hill	300 0 0	300 0 0
Mountain Creek–Addison's	100 0 0	100 0 0
Cascade Creek Road	450 0 0	450 0 0
Eight Mile–Mokihinui	200 0 0	200 0 0
Cedar Creek–Denniston	200 0 0	200 0 0
Blackwater–Big River	600 0 0	600 0 0
Kotuku–Bell Hill	500 0 0	500 0 0
Teremakau Bridge–Payne's	200 0 0	200 0 0
Waipuna–Mosquito	150 0 0	150 0 0
Nelson Creek–Bell Hill	500 0 0	500 0 0
Paroa–Teremakau	1,141 0 0	1,141 0 0
Brown's Creek Bridge–Old Marsden Road	250 0 0	250 0 0
Saltwater Creek Bridge	250 0 0	250 0 0
Adair's Track (widening)	430 0 0	430 0 0
Browning's Pass Track	485 1 0	485 1 0
Ogilvie's Beach Track	1,122 9 8	1,122 9 8
Kanieri Forks Road	450 0 0	450 0 0
Duffer's Road (widening)	300 0 0	300 0 0
Kanieri Lake Road	430 0 0	430 0 0
Dillman's Road–Nos. 4 and 5 Channels	210 6 0	210 6 0
Larrikin's Road	296 1 7	296 1 7
Saltwater Track	138 9 10	138 9 10
Whitcomb Valley Road	174 18 0	174 18 0
Waitahuna–Lawrence	500 0 0	500 0 0
Beaumont–Miller's Flat	200 0 0	200 0 0
Waitahuna–Round Hill	200 0 0	200 0 0
Nevis Valley Road	600 0 0	600 0 0
Cromwell Borough–Lowburn	200 0 0	200 0 0
Clyde–Cromwell (repairs)	500 0 0	500 0 0
Cromwell–Nevis	250 0 0	250 0 0
Crown Terrace–Cardrona	449 17 0	449 17 0
Arthur's Point–Moke Creek	260 0 0	260 0 0
Arrow Falls Road	300 0 0	300 0 0
Sawyer's Gully Road	100 0 0	100 0 0
Road to dredging claims, Waimumu	200 0 0	200 0 0
Garston–Nevis (Southland County)	300 0 0	300 0 0
Nokomai Saddle Road	200 0 0	200 0 0

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LIST OF WORKS ON GOLDFIELDS ETC.—*continued.*

Locality and Nature of Works.	Total Cost			Amount of Contribution paid by Mines Department.		
WORKS WHOLLY CONSTRUCTED BY MINES DEPARTMENT—*continued.*	£	s.	d.	£	s.	d.
Waikaka Valley Main Road (repairs)	200	0	0	200	0	0
Central Charlton Road	100	0	0	100	0	0
Waikaka to Coal-pit	150	0	0	150	0	0
Picton–Grove	3,278	16	8	3,278	16	8
Hokitika–Jackson's	2,391	11	4	2,391	11	4
Solberg's Hill	49	18	4	49	18	4
Upjohn's Hill	174	9	3	174	9	3
Moonlight Creek Bridge	800	15	7	800	15	7
Okarito Forks–Waiho	1,960	13	8	1,960	13	8
Mahakirau Goldfield Road	420	0	0	420	0	0
Tiki-te Koumu	440	0	0	440	0	0
Edwards Bridge	40	0	0	40	0	0
Bridle's Point–Deepwater	280	0	0	280	0	0
Wataroa Bluff Track	594	4	8	594	4	8
Coromandel–Whangapoua	1,703	0	0	1,703	0	0
Kikowhakarere–Cabbage Bay	1,300	0	0	1,300	0	0
Opitonui Bridge	400	0	0	400	0	0
Ohuka Creek Bridge	510	0	0	510	0	0
Driving Creek School Bridge, Tokatea Road	400	0	0	400	0	0
Kennedy Bay–Matamataharakeke	100	0	0	100	0	0
Karaka Creek encroachment	100	0	0	100	0	0
Dredging Waiwawa River	255	17	6	255	17	6
Manaia Goldfield Road	100	0	0	100	0	0
Colville II., Moehau II., and Harataunga I. Blocks	100	0	0	100	0	0
Harataunga I. and II. Blocks	100	0	0	100	0	0
Coromandel–Cabbage Bay	884	0	0	884	0	0
Tapu Creek and extension	1,756	1	11	1,756	1	11
Waiotahi Road	387	16	5	387	16	5
East side of Range Track	100	0	0	100	0	0
Tapu and Mercury Bay Track	250	9	0	250	9	0
Crosbie Settlement Road	200	0	0	200	0	0
Tairua–Broken Hills	298	10	0	298	10	0
Goldfields Roads (metalling)	100	0	0	100	0	0
Waiotahi Aqueduct (repairs)	100	0	0	100	0	0
Waiomo Creek Road	700	0	0	700	0	0
Paeroa–Te Aroha	943	11	2	943	11	2
Netherton Roads	1,066	10	6	1,066	10	6
Mackaytown–Rahu	200	0	0	200	0	0
Paeroa–Te Aroha Bridge	500	0	0	500	0	0
Thorpe–Neudorf	200	0	0	200	0	0
Bainham–Upper Aorere	200	0	0	200	0	0
Aorere Bridge (repairs)	250	0	0	250	0	0
West Wanganui Inlet Bridge	379	0	0	379	0	0
Long Plain Road extension	150	0	0	150	0	0
Takaka Hill Road	150	0	0	150	0	0
North Beach–Karamea	150	0	0	150	0	0
Lyell–Victoria Range	150	0	0	150	0	0
Promised Land–Ohinemuri	300	0	0	300	0	0
Land of Promise Road	700	0	0	700	0	0
Glass-eye Creek Track	200	0	0	200	0	0
Lyell–Cedar Creek	550	0	0	550	0	0
Granity Creek–Ngakawau	250	0	0	250	0	0
Seddonville–Mokihinui Mine	450	0	0	450	0	0
Coal Creek extension	100	0	0	100	0	0
Burnett's Face–Coalbrookdale	300	0	0	300	0	0
Waimangaroa–Granity	300	0	0	300	0	0
Seatonville–Mokihinui Mine	300	0	0	300	0	0
Nile Creek Bridge	100	0	0	100	0	0
Millerton Township streets	150	0	0	150	0	0
Mokihinui–Inangahua Junction	150	0	0	150	0	0
Murray Creek Road	399	10	7	399	10	7
Blackadder's Coal-mine Road	100	0	0	100	0	0
Crushington Road	100	0	0	100	0	0
Blackball–Healey's Gully	1,250	0	0	1,250	0	0
Maori Creek–Maori Gully	250	0	0	250	0	0
Grey–Dunganville Road bridges	400	0	0	400	0	0
Upper Moonlight Road	150	0	0	150	0	0
Hohonu River Bridge–Cape Terrace	200	0	0	200	0	0
Repairs (flood damages), Grey County roads	250	0	0	250	0	0
Brunner–Blackball	735	4	7	735	4	7
Repairs (flood damages), Brunner Borough	150	0	0	150	0	0
Mangles Valley Road	1,091	9	10	1,091	9	10
Inglewood–Painkiller	177	4	9	177	4	9
Great South Road (repairs)	300	0	0	300	0	0
Browning's Pass Track (widening)	100	0	0	100	0	0
Larrikins–Loop Line	199	16	9	199	16	9
Big Dam Track (repairs)	75	0	0	75	0	0
Fox's Road	100	0	0	100	0	0
Roaring Meg Bridge	150	0	0	150	0	0
Nevis River Bridge	150	0	0	150	0	0
Arrowtown–Macetown	1,700	0	0	1,700	0	0
Shotover River Track	500	0	0	500	0	0
Orepuki–Shale Works	100	0	0	100	0	0
Waikaka Valley Road (repairs)	250	0	0	250	0	0
Contingencies	1,367	7	7	1,367	7	7
Compensation to workmen for accidents	57	12	0	57	12	0
	373,505	16	2	373,505	16	2

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Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
Roads to open up Mines other than Gold.	£ s. d.	£ s. d.
Aniseed Valley to Champion Copper-mine	4,963 10 6	4,116 10 6
Richmond Hill to copper-mine	315 16 0	209 4 0
Track, Ohinemuri Coal-seam	267 3 4	133 11 8
Road, Kanieri Coalfield	600 0 0	300 0 0
	6,146 9 10	4,759 6 2
Tracks to open up Mineral Lands.		
Glory Harbour to Kopack	50 0 0	50 0 0
Port Pegasus Track	155 7 6	155 7 6
Removing snags and felling timber, Mokau River	40 0 0	40 0 0
Ngakawau Footbridge	80 0 7	80 0 7
	325 8 1	325 8 1
Repairing Flood-damages.		
Thames Borough	500 0 0	500 0 0
Artesian-well Boring.		
Maniototo Plains	800 0 0	800 0 0
Prospecting Deep Levels.		
Thames-Hauraki Goldfields (Limited), Queen of Beauty shaft	50,500 0 0	25,000 0 0
Thames-Hauraki Goldfields (Limited), Queen of Beauty shaft, Inspector's fee ..	500 0 0	500 0 0
Purchase of plant, machinery, and properties of Thames-Hauraki Goldfields (Limited)	6,099 18 1	6,099 18 1
Maintenance of plant, machinery, of Thames-Hauraki Goldfields (Limited) ..	178 5 7	178 5 7
	57,278 3 8	31,778 3 8
Resumption of Land for Mining.		
Resumption of J. Holmes's land at Kumara for a tailings-site	300 0 0	300 0 0
Resumption of O'Neil and McCormack's land at Back Creek	562 7 0	562 7 0
Purchase Cassrell and Bennett's leaseholds, Paeroa Township	2,250 0 0	2,250 0 0
	3,112 7 0	3,112 7 0

Summary of Works.

Roads (subsidised)—	£ s. d.	£ s. d.
Bay of Islands County	2,092 0 0	1,351 0 0
Coromandel County	19,286 3 9	11,455 15 10
Te Aroha Town Board	334 0 0	167 0 0
Thames County	14,054 15 11	7,984 6 11
Thames Borough	3,836 19 2	2,471 15 0
Ohinemuri County	10,257 17 9	5,687 8 5
Waitoa Road Board	200 0 0	130 0 0
Piako County	22,598 2 3	14,791 6 10
Katikati Road Board	507 19 6	253 18 9
Hutt County	959 16 6	435 17 0
Marlborough County	1,715 4 0	933 18 8
Waimea County	1,459 8 8	729 14 4
Collingwood County	3,681 1 8	2,144 19 10
Buller County	11,638 1 4	6,600 16 8
Inangahua County	17,552 14 8	10,530 17 10
Grey County	21,092 4 0	12,810 1 3
Westland County	11,008 15 6	6,724 6 10
Taieri County	499 15 0	333 3 4
Lake County	7,145 6 1	4,926 14 6
Tuapeka County	16,195 7 8	9,063 7 2
Cromwell Borough	500 0 0	250 0 0
Wallace County	1,309 6 0	662 19 8
Vincent County	1,532 0 0	850 0 0
Maniototo County	518 10 0	332 0 0
Fiord County	300 0 0	200 0 0
Waitaki County	1,841 12 0	20 16 0
Southland County	2,455 0 0	1,476 7 4
	174,572 1 5	103,268 12 2
Diamond and other drills	5,170 11 4	3,428 11 4
Wharves	435 15 9	285 15 9
Aids to prospecting	76,847 7 10	29,006 11 6
Water-races	38,878 7 0	35,192 14 8
Drainage and tailings channels	37,745 11 2	24,339 5 10
Aid towards treatment of ores	3,213 10 6	2,563 10 6
Roads wholly constructed by Mines Department	373,505 16 2	373,505 16 2
Roads to open up mines other than gold	6,146 9 10	4,759 6 2
Tracks to open up mineral lands	325 8 1	325 8 1
Repairing flood-damages	500 0 0	500 0 0
Artesian-well boring, Maniototo Plains	800 0 0	800 0 0
Resumption of land for mining	3,112 7 0	3,112 7 0
Aid towards construction of telephone-lines	60 0 0	50 0 0
Prospecting deep levels	57,278 3 8	31,778 3 8
Water-conservation on goldfields	21,978 1 6	21,978 1 6
	800,569 11 8	634,894 4 4

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RETURN showing the VALUE of the SALES of WATER, and EXPENDITURE on, and COLLATERAL ADVANTAGES derived from, the Working of the WATER-RACES constructed and maintained by GOVERNMENT during the Year ending 31st March, 1905.

Name of Water-race.	Value of Sales of Water and Channel Fees.	Expenditure on Maintenance.	Profit or Loss.	Cost of Construction.	Total Cost of Construction.	Average Number of Men employed.	Approximate Amount of Gold obtained.	Value of Gold obtained.	Average Weekly Earnings of Men after deducting Value of Sales of Water and Channel Fees.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		Oz.	£ s. d.	£ s. d.
Waimea	613 10 3	680 8 0	66 17 9*	147,463 7 9	219,169 18 4	20·25	1,880	7,137 0 0	6 5 5
Kumara	812 9 1	1,284 2 4	471 13 3*	49,741 12 5		19·75	1,628	6,349 0 0	5 6 6
Kumara Sludge-channel	..	..	..	21,964 18 2		..	..	..	6 13 9
Callaghan's	685 4 7	526 16 2	158 8 5	6,027 15 6	6,027 15 6	16·58	1,708	6,661 4 0	..
Nelson Creek	..	..	..	90,722 10 8	90,722 10 8	..	..	..	..
Argyle	..	..	..	15,151 15 3	15,151 15 3	..	..	..	..
Mikonui	..	..	..	25,927 4 6	25,927 4 6	..	..	..	..
Mount Ida	1,459 11 3	1,563 9 6	103 18 3*	73,123 14 3	73,123 14 3	38·25	1,933	7,442 1 0	3 1 3
Blackstone Hill	32 18 4	4 8 0	28 10 4			1	..	..	..
Totals	3,603 13 6	4,059 4 0	455 10 6*	430,122 18 6	430,122 18 6	..	7,099	27,589 5 0	..

* Loss on working.

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WARDEN'S COURT TABLES.

No. 1.

STATEMENT showing the REVENUE of the GOLDFIELDS collected in the several DISTRICTS of the COLONY of NEW ZEALAND, for the Period from 1st January to 31st December, 1904.

District.	Miners' Rights.	Business Licenses, Machine and Residence Sites.	Water-races, Sluices, &c.	Gold-mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous.	Totals.
AUCKLAND.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Coromandel ..	50 0 0	..	..	436 19 6	..	..	43 6 3	530 5 9
Te Aroha ..	40 5 0	526 7 11	6 10 0	65 16 6	8 12 0	1 13 0	32 1 6	681 5 11
Ohinemuri ..	74 15 0	188 10 1	..	516 13 11	22 8 0	45 11 0	850 2 8	1,698 0 8
Thames ..	204 5 0	110 10 2	1 10 0	1,031 3 6	26 5 0	30 2 4	204 14 6	1,608 10 6
Whangarei ..	2 0 0	0 15 0	..	41 5 0	..	0 8 0	10 0 9	54 8 9
Tauranga ..	2 5 0	..	0 2 0	9 14 10	0 4 0	..	1 19 11	14 5 9
Waihi	214 5 0	389 0 3	..	1,250 9 8	47 1 6	65 1 6	1,030 8 5	2,996 6 4
Totals ..	587 15 0	1215 8 5	8 2 0	3,352 2 11	104 10 6	142 15 10	2,172 14 0	7,583 8 8
NELSON.								
Motueka ..	0 10 0	..	..	12 0 0	..	..	..	12 10 0
Collingwood ..	14 15 0	..	1 0 0	309 10 11	3 12 0	11 19 0	21 7 0	362 3 11
Westport ..	88 0 0	5 16 0	5 15 0	397 18 2	15 3 0	55 15 0	1,713 17 4	2,282 4 6
Charleston ..	29 15 0	..	1 5 0	72 5 1	1 8 0	6 18 0	3 17 0	115 8 1
Ahaura	52 10 0	3 0 0	6 5 0	2,016 9 1	21 3 0	38 8 0	38 19 6	2,176 14 7
Reefton.. ..	58 15 0	36 8 10	..	1,642 18 11	..	42 19 6	139 7 8	1,920 9 11
Wangapeka ..	3 15 0	..	..	102 5 0	..	..	0 5 0	106 5 0
Lyell and Murchison	19 10 0	0 2 0	..	492 17 1	0 2 0	23 19 0	124 2 10	660 12 11
Takaka ..	5 5 0	..	0 5 0	22 14 10	0 1 0	2 7 0	..	30 12 10
Totals ..	272 15 0	45 6 10	14 10 0	5,068 19 1	41 9 0	182 5 6	2,041 16 4	7,667 1 9
MARLBOROUGH.								
Havelock ..	15 0 0	1 10 0	0 15 0	40 13 9	0 16 0	1 12 0	0 18 6	61 5 3
Blenheim ..	4 0 0	1 6 8	..	223 11 1	0 17 0	1 18 0	1 15 0	233 7 9
Totals ..	19 0 0	2 16 8	0 15 0	264 4 10	1 13 0	3 10 0	2 13 6	294 13 0
WESTLAND.								
Hokitika and Kanieri	60 0 0	..	..	288 7 2	..	5 0 0	14 4 0	367 11 2
Greymouth ..	106 5 0	0 15 0	2 0 0	1,158 19 1	..	64 5 6	2,281 11 9	3,613 16 4
Ross	18 5 0	..	2 5 0	322 11 11	8 1 0	4 18 0	12 0 9	368 1 8
Stafford.. ..	22 0 0	..	4 15 0	253 17 2	0 2 0	31 9 6	..	312 3 8
Okarito	10 15 0	..	..	41 8 6	3 15 0	..	14 11 5	70 9 11
Kumara ..	55 0 0	..	..	426 18 8	10 17 0	26 3 0	..	518 18 8
Totals ..	272 5 0	0 15 0	9 0 0	2,492 2 6	22 15 0	131 16 0	2,322 7 11	5,251 1 5
CANTERBURY.								
Ashburton ..	..	..	..	..	..	..	..	..
OTAGO AND SOUTHLAND.								
Middlemarch ..	1 10 0	..	..	6 5 0	0 4 0	0 6 0	..	8 5 0
Tapanui ..	1 0 0	..	..	5 0 9	0 7 0	0 4 0	..	6 11 9
Hindon	25 15 0	..	..	67 13 9	0 6 0	1 1 0	2 17 0	97 12 9
Naseby	43 10 0	50 6 6	1 7 6	481 15 0	0 2 0	38 14 0	54 7 0	670 2 0
Black's .. Alexandra Clyde .. Roxburgh	93 5 0	6 4 0	16 5 0	2,376 2 9	23 10 0	60 18 0	25 12 11	2,601 17 8
Cromwell ..	61 15 0	29 10 0	7 15 0	1,196 3 3	13 0 0	21 2 0	99 9 8	1,428 14 11
Queenstown ..	29 10 0	2 17 0	0 10 0	461 8 6	..	25 0 0	1 17 11	521 3 5
Arrowtown ..	15 15 0	1 13 0	0 5 0	195 2 9	0 1 0	13 11 0	40 18 0	267 5 9
Lawrence ..	54 10 0	0 4 0	6 5 0	948 2 7	19 5 0	25 4 0	10 17 6	1,064 8 1
Orepuki ..	..	..	..	27 6 2	4 0 0	9 10 6	7 15 0	48 11 8
Riverton and Longwood	29 5 0	15 10 0	..	163 1 9	8 4 0	6 2 6	100 10 0	322 13 3
Pembroke ..	5 10 0	..	0 10 0	0 15 0	0 8 0	..	..	7 3 0
Waikaia ..	9 15 0	3 0 0	3 0 0	256 16 6	2 14 0	11 7 0	27 17 6	314 10 0
Wyndham ..	2 10 0	..	..	3 4 6	0 4 0	0 12 0	5 1 0	11 11 6
Gore	3 15 0	..	0 10 0	239 3 7	2 7 0	8 0 0	4 14 0	258 9 7
Totals ..	377 5 0	109 4 6	36 7 6	6,428 1 10	74 12 0	221 12 0	381 17 6	7,629 0 4
Grand totals ..	1,529 0 0	1373 6 5	68 14 6	17605 11 2	244 19 6	681 19 4	6,921 9 3	28,425 0 2

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No. 4.

COMPARATIVE RETURN of the TOTAL AMOUNTS of GOLDFIELDS REVENUE (exclusive of Gold Duty) collected in the several Districts during the Years 1904 and 1903 and the Quarters ending 31st March, 1905 and 1904 respectively, showing the INCREASE or DECREASE in respect of each District.

District.	Years 1904 and 1903.				Quarters ending 31st March, 1905, and 31st March, 1904.			
	1904.	1903.	Increase.	Decrease.	1905.	1904.	Increase.	Decrease.
AUCKLAND.	£	£	£	£	£	£	£	£
Coromandel	530	459	71	..	131	119	12	..
Te Aroha	682	908	..	226	249	158	91	..
Thames	1,609	1,986	..	377	1,046	462	584	..
Whangarei	54	17	37	..	8	44	..	36
Ohinemuri	1,696	1,749	..	51	640	758	..	118
Tauranga	14	30	..	16	6	2	4	..
Waihi	2,997	2,299	698	..	790	768	22	..
NELSON.								
Motueka	13	16	..	3	1	6	..	5
Collingwood	362	466	..	104	118	191	..	73
Westport	2,282	1,236	1,046	..	763	250	513	..
Charleston	115	59	56	..	31	24	7	..
Ahaura	2,177	1,889	288	..	550	503	47	..
Reefton	1,920	2,244	..	324	732	584	148	..
Wangapeka	106	100	6	..	1	50	..	49
Lyell and Murchison ..	661	648	13	..	285	122	163	..
Takaka	31	34	..	3	8	5	3	..
MARLBOROUGH.								
Havelock	61	62	..	1	6	16	..	10
Blenheim	233	311	..	78	34	58	..	24
WESTLAND.								
Hokitika ..	367	865	..	498	89	286	..	197
Kanieri ..								
Greymouth	3,614	4,429	..	815	2,767	1,308	1,459	..
Ross	369	577	..	208	34	53	..	19
Stafford and Goldsborough	312	508	..	196	47	112	..	65
Okarito	70	140	..	70	24	18	6	..
Kumara	519	809	..	290	151	356	..	205
CANTERBURY.								
Ashburton	..	1	..	1	1	..	1	..
OTAGO AND SOUTHLAND.								
Hindon	98	104	..	6	40	43	..	3
Naseby	670	732	..	62	241	151	90	..
Alexandra ..								
Black's ..	2,602	2,806	..	204	871	847	24	..
Clyde ..								
Roxburgh ..								
Cromwell	1,429	1,194	235	..	280	635	..	355
Arrowtown	267	327	..	60	68	117	..	49
Queenstown	521	582	..	61	163	128	35	..
Pembroke	7	10	..	3	1	1	..	..
Lawrence	1,064	1,051	13	..	368	453	..	85
Waikaia	315	377	..	62	141	47	94	..
Tapanui	6	23	..	17	1	1	..	..
Orepuki, Preservation, Longwood, and Riverton	371	573	..	202	133	202	..	69
Wyndham	12	27	..	15	4	1	3	..
Middlemarch	8	6	2	..	6	4	2	..
Gore	259	268	..	9	117	126	..	9
Totals	28,425	29,922	2,465	3,962	10,946	9,009	3,808	1,871
Net decrease ..	..	..	..	1,497	..	..	1,937	..
Net increase ..	..	..	..	..	..	..	..	..

No. 5.

RETURN of GOLD DUTY credited to LOCAL BODIES for the Year ended 31st December, 1904, and Quarter ended 31st March, 1905.

Local Body.	For the Year ended 31st December, 1904.	For the Quarter ended 31st March, 1905.
COUNTIES—	£ s. d.	£ s. d.
Coromandel	291 0 4	427 13 6
Ohinemuri	4,701 1 0	659 8 2
Piako	18 17 7	5 16 5
Thames	646 14 2	2 9 9
BOROUGHS—		
Te Aroha	0 5 0	0 1 3
Thames	313 3 8	1 14 1
Waihi	17,017 14 2	2,881 3 11
Totals	22,988 15 11	3,978 7 1

ROBERT J. COLLINS,
Assistant Secretary to the Treasury and Accountant.

The Treasury, Wellington, 23rd May, 1905.

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No. 6.

RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY* for EXPORTATION from NEW ZEALAND from 1st APRIL, 1857, to 31st DECEMBER, 1904.

PRODUCE OF THE GOLDFIELDS IN		DURING THE QUARTER ENDED 31ST DECEMBER, 1904.		ENTERED FOR EXPORTATION TO THE 30TH SEPTEMBER, 1904.		TOTAL ENTERED FOR EXPORTATION FROM NEW ZEALAND TO THE 31ST DECEMBER, 1904.	
County or Borough.	District.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		Oz.	£	Oz.	£	Oz.	£
County of Thames ..	Auckland	42	145				
" Ohinemuri ..		7,742	27,238				
" Coromandel		5	9				
" Piako ..		..	..				
Borough of Thames ..		..	..				
" Waihi ..		41,186	146,243				
Great Barrier Island ..		..	..				
		48,975	173,635	3,415,731	12,685,071	3,464,706	12,858,706
	Wellington ..	..	..	188	706	188	706
County of Marlborough	Marlborough ..	..	..	89,099	347,214	89,099	347,214
County of Collingwood	Nelson	1,224	4,895				
" Waimea ..		14	56				
		1,238	4,951	1,703,928	6,754,908	1,705,166	6,759,859
County of Buller ..	West Coast	1,474	5,906				
" Inangahua ..		15,611	62,442				
" Grey ..		6,033	24,128				
" Westland ..		2,554	10,201				
Borough of Kumara ..		..	..				
" Hokitika ..		30	120				
" Ross ..		334	1,330				
		26,036	104,127	4,997,189	19,889,694	5,023,225	19,993,821
	Canterbury ..	..	..	99	387	99	387
County of Taieri ..	Otago	391	1,575				
" Tuapeka ..		9,033	36,444				
" Vincent ..		12,683	51,395				
" Maniototo ..		2,103	8,440				
" Waihemo ..		525	2,132				
" Waitaki ..		1,201	4,833				
" Lake ..		145	583				
" Wallace ..		2,467	9,926				
" Waikouaiti ..		..	..				
" Bruce ..		21	83				
" Clutha ..		..	..				
" Fiord ..		20	81				
" Southland ..		11,132	44,793				
" Stewart Island		..	..				
		39,721	160,285	6,303,730	25,014,846	6,343,451	25,175,131
	Unknown ..	..	..	207	824	207	824
Totals		115,970	442,998	16,510,171	64,693,650	16,626,141	65,136,648

* Gold duty abolished in the South Island on the 31st March, 1891, by "The Gold Duty Abolition Act, 1890."

No. 7.

COMPARATIVE RETURN for the YEARS ended 31st DECEMBER, 1904 and 1903.

PRODUCE OF THE GOLDFIELDS IN THE DISTRICT OF	DURING THE QUARTER ENDED—				TOTALS FOR YEAR 1904.		TOTALS FOR YEAR 1903.	
	31st March, 1904.	30th June, 1904.	30th September, 1904.	31st December, 1904.	Quantity.	Value.	Quantity.	Value.
	Oz.	Oz.	Oz.	Oz.	Oz.	£	Oz.	£
Auckland ..	47,037	65,456	61,542	48,975	223,010	791,529	232,681	832,334
Marlborough ..	307	..	166	..	473	1,890	972	3,845
Nelson ..	1,121	1,312	1,378	1,238	5,049	20,141	7,962	31,710
West Coast ..	34,566	34,084	27,624	26,036	122,310	489,177	125,241	501,090
Otago ..	42,052	41,370	46,335	39,721	169,478	684,764	166,458	668,852
Totals for 1904	125,083	142,222	137,045	115,970	520,320	1,987,501	..	..
Totals for 1903	117,952	139,246	148,992	132,124	..	..	533,314	2,037,881

W. T. GLASGOW,
Secretary and Inspector.

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No. 8.

RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY* for EXPORTATION from NEW ZEALAND from 1ST APRIL, 1857, to 31ST MARCH, 1905.

PRODUCE OF THE GOLDFIELDS IN		DURING THE QUARTER ENDED 31ST MAR., 1905.		ENTERED FOR EXPORTATION TO THE 31ST DECEMBER, 1904.		TOTAL ENTERED FOR EXPORTATION FROM NEW ZEALAND TO THE 31ST MARCH, 1905.	
County or Borough.	District.	Qu'ntity	Value.	Quantity.	Value.	Quantity.	Value.
		Oz.	£	Oz.	£	Oz.	£
County of Thames ..	Auckland	3,282	13,679				
" Ohinemuri ..		6,594	23,446				
" Coromandel ..		4,276	18,044				
" Piako ..		58	245				
Borough of Thames ..		3,410	14,316				
" Waihi ..		28,812	118,605				
Great Barrier Island ..		246	870				
County of Te Aroha ..		1	2				
		46,679	189,207	3,464,706	12,858,706	3,511,385	13,047,913
	Wellington ..	..	..	188	706	188	706
County of Marlborough	Marlborough ..	..	..	89,099	347,214	89,099	347,214
County of Collingwood ..	Nelson	2,483	9,932				
" Waimea ..		50	198				
		2,533	10,130	1,705,166	6,759,859	1,707,699	6,769,989
County of Buller ..	West Coast	4,517	17,959				
" Inangahua ..		14,656	58,622				
" Grey ..		8,262	33,050				
" Westland ..		3,858	15,430				
Borough of Kumara ..		..	..				
" Hokitika ..		20	81				
" Ross ..		488	1,955				
		31,801	127,097	5,023,225	19,993,821	5,055,026	20,120,918
	Canterbury ..	..	..	99	387	99	387
County of Taieri ..	Otago	512	2,067				
" Tuapeka ..		9,742	39,645				
" Vincent ..		12,159	49,159				
" Maniototo ..		3,219	12,935				
" Waihemo ..		806	3,275				
" Waitaki ..		406	1,623				
" Lake ..		1,788	7,276				
" Wallace ..		2,289	9,204				
" Waikouaiti ..		..	..				
" Bruce ..		178	719				
" Clutha ..		..	..				
" Fiord ..		241	967				
" Southland ..		11,622	46,885				
Stewart Island ..		..	..				
		42,962	173,755	6,343,451	25,175,131	6,386,413	25,348,886
	Unknown ..	..	..	207	824	207	824
Totals ..	..	123,975	500,189	16,626,141	65,186,648	16,750,116	65,686,837

*Gold duty abolished in the South Island on 31st March, 1901, by "The Gold Duty Abolition Act, 1901."

No. 9.

COMPARATIVE RETURN for the QUARTERS ended 31ST MARCH, 1905 and 1904.

District.	Quarter ended 31st March, 1905.		Quarter ended 31st March, 1904.	
	Quantity.	Value.	Quantity.	Value.
	Oz.	£	Oz.	£
Auckland	47,679	189,207	47,037	165,237
Marlborough	..	..	307	1,228
Nelson	2,533	10,130	1,121	4,457
West Coast	31,801	127,097	34,566	138,224
Otago	42,962	173,755	42,052	169,968
Totals	123,975	500,189	125,083	479,114

W. T. GLASGOW,
Secretary and Inspector.

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No. 10.

STATEMENT showing the PRICE of GOLD per OUNCE, PRICE charged per TON for CRUSHING QUARTZ or CEMENT, and PRICES charged for WATER per SLUICE-HEAD per WEEK, during the Year ending 31st December, 1904.

District.		Price of Gold per Ounce.	Price charged per Ton for crushing Quartz or Cement.	Price charged for Water per Sluice-head per Week.	Remarks.
		£ s. d.	£ s. d.	£ s. d.	
AUCKLAND—	Thames	2 12 6	0 5 0	£3 to £4	..
	Coromandel	£3 15s. to £4	0 10 0	..	..
	Paeroa	4 4 0	..	..	..
	Te Aroha	4 4 0	..	..	..
	Waihi	4 11 0	..	..	Gold refined by Waihi Gold Mining Company, other gold produced ranges from £1 10s. to £2 10s.
	Tauranga	..	..	..	
MARLBOROUGH—	Havelock	3 17 0	..	..	No water sold.
	Blenheim	£3 12s. to £3 15s.	..	..	..
NELSON—	Wangapeka	£3 10s. to £3 15s.	..	..	..
	Motueka	£3 12s. to £3 14s.	..	..	..
	Charleston	3 19 0	..	2 5 0	20 in.
	Inangahua	£3 18s. to £4.	..	..	..
	Collingwood	£3 13s. 6d. to £4 1s.	..	..	..
	Takaka	3 14 6	..	..	..
	Westport	3 18 8	..	..	..
	Murchison ..	£3 17s. to £4 1s.	0 10 0	..	..
	Lyell				
WESTLAND—	Hokitika, Kanieri, and Waimea .	£3 18s. to £4	..	2 10 0	40 in.
	Totara and Ross . ..	3 18 0	..	..	..
	Stafford	3 18 0	..	1 10 0	..
	Greymouth	3 18 0	0 12 0	0 10 0	20 in. by 2 in.
	Kumara	3 18 0	..	1 0 0	..
	Ahaura	3 19 0	0 10 0	1 0 0	Moonlight Gold is worth up to £4 3s. per oz.
	Okarito	3 18 0	..	..	
OTAGO AND SOUTHLAND—	Hindon	3 17 6	..	..	..
	Tuapeka	3 17 6	..	3 0 0	..
	Longwood ..	£3 13s. 6d. to £3 18s. 6d.	..	£1 5s. to £1 15s.	..
	Preservation and Waiau		..	2s. 6d. to £2	..
	Orepuki and Round Hill		..		..
	Arrow (Wakatipu Goldfield) and Queenstown	3 17 0	0 12 6	1 0 0	20 in. by 2 in.
	Mount Ida ..	3 17 0	..	1 0 0	40 cubic in. 1 sluice-head.
	Macrae's, Hyde ..				
	Hamilton, Serpentine				
	Macrewhenua	3 17 0	..	1 0 0	20 in. by 2 in.
	Cromwell	3 17 0	..	..	..
	Waikaia	3 17 6	0 8 0	1 4 0	20 in. by 2 in.
	Tapanui	3 17 6	..	..	..
	Wyndham	£3 16s. to £3 18s.	..	..	..
	Roxburgh ..	3 17 0	..	..	..
	Clyde and Alexandra				
	Black's				
	Gore	4 0 0	..	..	..

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No. 11.

RETURN showing the AVERAGE PRICES of PROVISIONS and LIVE-STOCK for the Year ending 31st December, 1904.

District.	Beer.	Brandy.	Bread—Wheaten.	Butter—Fresh.	Butter—Salt.	Cheese.	Coffee.	Flour.	Grain—Wheat.	Live-stock.					Meat.			Milk.	Rice.	Salt.	Sugar.	Tea.	Tobacco.	Wine.
										Cattle—Horned.	Goats.	Horses.	Sheep.	Swine.	Beef.	Mutton.	Pork.							
	Per. hhd.	Per gall.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per 100 lb.	Per Im. bushel.	Per head.	Per head.	Per head.	Per head.	Per head.	Per lb.	Per lb.	Per lb.	Per qt.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per gallon.
			d.							£		£			d.	d.	d.	d.	d.	d.	d.			
AUCKLAND—																								
Thames	90/	27/	1¾	1/	/6	/6	1/10	11/6	4/6	8	10/	12	15/	12/	5	5	6	4	2½	½	3	1/6	5/6	15/-20/
Paeroa.. ..	80/	17/	2	1/	/9	/7½	1/6	15/	5/9	6/10-10	..	10-40	15/-20/	40/-70/	5	4½	6	4	2	1	2½	1/6	5/6	18/
Coromandel	100/	27/	2	1/1	/9	/7	1/4-1/10	12/6	5/6	7-10	10/	5-40	17/6	20/-70/	5-9	3-7	7	2½	2½	1	2½	1/4-3/	5/6	26/
Tauranga	112/	42/	1½	/10	..	/8	1/8	11/	4/6	5-10	..	5-40	15/-20/	10/-35/	3-8	3½-6	5	3	3	1	2½-4	1/-2/6	5/6-7/	10/
Te Aroha	140/	60/	2	1/1	/7	/6	2/	15/	3/6	8	..	15	22/	30/	6	5	6	3	3	½	3	1/10	6/	9/
Waihi	95/	27/6	1¾	1/	1/	/7	1/-1/10	..	..	6/10-9	..	20-40	15/-20/	10/-40/	5	3½	6-7	4	3	1	2½-3	1/-2/	5/6-8/	20/
MARLBOROUGH—																								
Blenheim	85/	32/6	1¾	/11	/9	/7	1/9	10/9	3/3	5	..	29	17/	28/	4-6	4-6	6	3	3	1	3	1/10	5/3	16/
Havelock	90/	28/	1	/10	..	/7	2/	13/	5/	5-12	..	9-40	18/-20/	..	6	5	5	4	3½	1	3	2/	6/	20/
NELSON—																								
Wangapeka	..	..	2	/8	/8	/8	1/4	14/	..	4-6	..	15-40	14/-20/	30/-70/	5	5	4½	4	3	1¼	3	2/-3/	6/-7/	..
Collingwood	95/	30/	2	/11	/8	/8	1/9-2/6	15/	5/6	6-7	..	10-50	15/6	15/-35/	6	5	6	4	3	2	4	1/10-2/6	6/	10/
Takaka	85/	27/	2	/8	/7	/7	1/9	11/	5/	5-6	..	8-40	17/-22/6	20/-30/	4	5	6	3	3	1	3½	2/	6/	7/
Inangahua	90/	25/-66/	2	1/1	/11	/8	2/	15/	4/6	7/10/0	10/	7-70	20/	5/	5-7	6	6	5	3	1	3	2/	6/	15/-24/
Lyell ..	110/	26/	2½	1/1	1/	/9	2/	15/6	7/	6	..	20	18/	50/	6	6	6	4	4	2	3½	2/	6/	20/
Murchison ..																								
Westport	90/	26/	1¾	1/	/10	/6	1/9	12/6	4/3	11	10/	20	20/	37/	6	6	6	5	3	1	3	1/9	5/6	16/6
Charleston	90/	35/	2	1/	..	/8	2/	14/	6/	7/10/0	..	35	23/	70/	6	6	6	6	3	1	3	1/10	6/	18/
Ahaura	112/6	25/	2	1/	/9	/8	2/	16/	6/	8-15	5/	10-60	15/-25/	30/-80/	6	6	8	4	3	2	3	2/	5/6-6/6	15/
WESTLAND—																								
Stafford ..	100/	30/	1¾	1/	1/	/8	1/9	14/	5/6	7	5/	20	18/	40/	6	6	7	4	3	1	3½	1/10	6/	26/
Waimea ..																								
Hokitika and Kanieri ..	85/	25/	1¾	/9	/7	/7	1/6	11/6	4/	7-8	..	15-35	15/	30/-40/	4	5	7	6	2½	1	2½	2/6	5/6	12/-30/
Ross	130/	30/	2	1/2	1/	/8	2/	15/	6/	5-10	..	10-75	18/	50/	7	6	6	4	3	1	3	2/6	6/6	15/
Okarito	114/	30/	3	1/3	1/	/9	2/	16/	..	8/10-9	..	15-40	20/	..	5½	5½	..	..	4	2	4	2/6	6/6	22/
Kumara	85/	23/6	2	1/3	1/	/8	1/6	13/	5/6	8-13	5/	9-40	20/	40/-100/	7	8	7	6	3	2	3	1/3-2/	7/-8/	22/
Greymouth	90/	26/	1¾	1/	1/	/7	1/9	12/6	4/6	3-9/10	..	9-40	11/-18/	18/-65/	4-8	6-8	7	4	2½	1½	3	2/	5/	16/6
OTAGO—																								
Hindon	..	..	2	1/3	/10-1/	/9	2/3	16/	..	6-12	..	12-40	13/-24/	..	4-8	4½	..	4	3½	1½	3½	2/3	6/	..
Tuapeka	90/	25/	1½	/9	/8	/7	1/6	12/	3/	6	..	15-40	13/-23/	25/	6	5½	6	3	2½	1	2¾	1/8	5/6	21/
Tapanui	..	..	1¾	/7	/7	/6½	1/9	12/	3/3	4/10/0	..	30	18/	45/	6	5	6	3	3	1	3	1/8	5/6	..
Cromwell	100/	28/	1¾	1/	1/	/8	1/9	11/	3/6	8	..	15-60	20/-27/	40/	5	5	6	4	3	1¼	3¼	1/8	6/	18/
Clyde ..																								
Alexandra ..	90/	28/	2	1/3	1/3	/8	1/9	12/	4/6	5	..	7-45	16/6	50/	6	5	7	5	2	1½	3½	2/	5/-7/	18/
Roxburgh ..																								
Black's ..																								
Queenstown	90/	25/	1½	1/	/10	/8	1/	12/-13/	5/	6/7/10	..	18-60	13/-20/	30/-50/	5-7	4½-6	6	4-6	3	1	3	1/10	5/-6/	20/-25/
Wyndham	80/	32/	1½	1/	/10	/7	1/8	12/	3/	8	..	25	17/6	45/	6	6	7	4	2½	1	3	1/9	5/6	18/
Arrow (Wakatipu Goldfield)	90/	25/	1½	1/	/10	/8	1/	12/	5/	6/7/10	..	18-60	13/-20/	30/-50/	5-7	5-6	6	6	4	1	3	1/10	5/-6/	20/-25/
Mount Ida ..	102/	27/-42/	1¾	1/1	/10	/8	1/6-2/3	13/	3/9	7-10	..	12-45	18/-23/	50/-60/	6-8	5-6	6-7	4	3	2	3-3½	1/6-2/4	5/3-8/	18/-25/
Nenthorn ..																								
Waikaia	90/	30/	2	1/	/10	/9	2/	15/	3/4	8-10	..	25	18/	32/6	7	6	6	4	4	2	4	2/3	6/	30/
Riverton and Orepuki ..	82/6	33/-35/	2	/10	/8	/8	1/1	12/6	3/9	5	..	30	20/	30/	4-6	4-6	7-8	3	3	1	3	1/6-2/	5/-6/	27/-39/
Gore	..	..	1½	/8	/6	/8	1/8	11/	3/6	10	..	50	17/6	40/	6	5	4½	3	2½	1	2½	2/	5/	..

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No. 12.

TABLE showing the AVERAGE RATE of WAGES per WEEK for the Year ending 31st December, 1904.

District.	General Managers.	Legal Managers.	Mining Managers.	Engineers.	Engine-drivers.	Stokers.	Blacksmiths.	Carpenters.	Miners.	Labourers.	Boys.	Chinese.	Agricultural Labourers.	Domestic Servants.
AUCKLAND—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Coromandel	£500 to £600	1 0 0	£4 to £5	4 0 0	2 14 0	2 8 0	2 14 0	£2/14 to £3	£2/5 to £2/14	2 8 0	0 5 0	..	..	10/ to 12/
Thames	£500 to £1000	£1 to £2	£3 to £5	£3 to £3/10	2 14 0	2 8 0	2 8 0	3 0 0	2 5 0	2 2 0	5/ to 30/	..	1 16 0	10/ to 15/
Te Aroha	8 0 0	2 0 0	6 0 0	4 0 0	2 11 0	2 2 0	3 0 0	3 0 0	2 11 0	2 2 0	0 15 0	..	1 0 0	7/6 to 15/
Paeroa	£200 to £1200	£1 to £2	£4 to £10	£4 to £8	£2/10 to £3	£2/5–£2/11	£2/14 to £3	£2/17 to £3/10	£2/8 to £3/10	£2 to £2/10	£1 to £2	..	10/ to 30/	10/ to 17/6
Tauranga	..	..	2 8 0	3 0 0	2 10 0	2 0 0	£3 to £3/12	3 0 0	2 8 0	2 2 0	1 0 0	..	1 16 0	10/ to 15/
Waihi	..	..	..	..	£2/14 to £3	2 5 0	2 10 0	2 17 0	2 8 0	2 5 0	1 16 0	..	£1 and found	10/
MARLBOROUGH—														
Havelock	..	..	..	3 10 0	2 14 0	2 8 0	2 14 0	2 14 0	2 8 0	2 2 0	..	..	30/–35/ found	12/ to 20/
Blenheim	..	1 0 0	..	3 0 0	3 0 0	2 16 0	2 10 0	3 0 0	£2/8 to £2/14	£1/16 to £2/8	5/ to 15/	..	25/ and found	7/ to 15/
NELSON—														
Collingwood	£6 to £8	..	£6 to £8	£3/10 to £4	3 0 0	2 10 0	3 0 0	2 17 0	2 17 0	2 11 0	15/ to 25/	..	£2/5 to £3	8/ to 20/
Takaka	..	..	4 0 0	..	2 10 0	..	2 10 0	2 14 0	2 8 0	2 2 0	19/ and found	..	20/–25/ found	7/ to 12/
Inangahua	..	£1 to £2	£4 to £10	4 0 0	£3/10 to £4	3 0 0	£3/10 to £4	£3/10 to £4	£2/17 to £3	2 11 0	1 0 0	..	£1 to £1/5	5/ to 20/
Charleston	..	..	..	..	..	..	..	2 8 0	2 14 0	2 14 0	1 0 0	..	..	15/
Westport	..	10/ to 20/	4 0 0	..	3 0 0	2 14 0	3 0 0	3 12 0	2 14 0	2 8 0	1 10 0	..	..	12/ to 20/
Lyell and Murchison ..	..	..	5 0 0	4 0 0	3 10 0	3 0 0	3 10 0	3 10 0	3 0 0	2 14 0	1 0 0	0 15 0	£1/ & found	12/
Ahaura	..	£1 to £1/5	5 0 0	4 0 0	3 0 0	3 0 0	3 6 0	3 12 0	3 14 0	2 8 0	1 10 0	1 5 0	1 0 0	15/
WESTLAND—														
Waimea and Stafford ..	6 0 0	2 0 0	5 0 0	3 10 0	3 0 0	2 10 0	3 10 0	3 10 0	2 14 0	2 14 0	1 10 0	1 0 0	1 10 0	10/
Hokitika and Kanieri ..	..	1 10 0	4 0 0	4 0 0	3 12 0	3 0 0	3 0 0	4 4 0	2 14 0	2 14 0	1 10 0	1 16 0	1 16 0	9/ to 10/
Ross	..	1 10 0	6 0 0	4 10 0	3 10 0	3 0 0	4 0 0	3 12 0	3 3 0	3 0 0	1 10 0	..	..	10/
Kumara	6 0 0	2 0 0	4 0 0	3 10 0	3 0 0	..	£3 to £3/10	£3 to £4/4	3 0 0	2 18 0	1 0 0	..	..	5/ to 15/
Greymouth	..	£1 to £2	£4 to £6	£3 to £5	3 0 0	2 10 0	£3 to £3/15	£3 to £3/12	£2/10 to £3	£2/2 to £3	8/ to 20/	£1 to £1/10	20/–30/ found	7/6 to 20/
Okarito	5 0 0	..	..	..	3 0 0	..	..	4 10 0	..	2 14 0	..	..	30/ and found	15/
OTAGO AND SOUTHLAND—														
Hindon	..	1 10 0	5 0 0	..	2 14 0	..	3 0 0	..	£2/8 to £2/14	2 2 0	..	..	..	..
Tuapeka	12 0 0	2 0 0	3 10 0	5 0 0	2 10 0	2 2 0	2 14 0	3 0 0	2 2 0	2 0 0	0 10 0	0 10 0	1 0 0	10/ to 14/
Tapanui	..	..	4 10 0	3 10 0	..	..	3 0 0	3 0 0	2 10 0	2 5 0	1 0 0	1 10 0	1 10 0	18/
Cromwell	£4 to £6	£1 to £4	4 10 0	£4/10 to £6	3 0 0	3 0 0	£3 to £3/12	3 10 0	3 0 0	£2/8 to £2/14	15/ to £1/10	£1/5 to £1/10	15/ to 35/ and found	6/ to 20/
Clyde ..														
Alexandra ..	5 0 0	1 5 0	5 0 0	4 0 0	3 0 0	..	4 0 0	3 10 0	3 0 0	2 8 0	10/ and found	1 5 0	£1/5 & found	12/6 to 15/
Black's ..														
Roxburgh ..														
Waikaia	..	5 0 0	4 0 0	4 0 0	2 14 0	..	3 0 0	3 12 0	2 8 0	2 2 0	0 12 6	0 17 6	1 0 0	12/6
Orepuki and Riverton ..	..	1 13 0	1 13 0	..	..	..	2 14 0	2 14 0	£2/5 to £2/8	2 5 0	1 0 0	0 6 0	1 5 0	10/ to 12/
Arrow	£4 to £5	1 0 0	3 0 0	3 10 0	3 0 0	3 0 0	3 0 0	£2/8 to £2/15	2 8 0	2 8 0	£1/10 to £2/2	2 5 0	1 10 0	12/ to 15/
Queenstown	£4 to £5	1 0 0	3 0 0	3 10 0	3 0 0	..	£3 to £3/10/	3 0 0	£2/8 to £2/15	2 8 0	£1/10 to £2/2	2 5 0	30/ and found	12/ to 15/
Mount Ida	..	..	4 0 0	..	..	..	3 0 0	3 0 0	2 8 0	£2/2 to £2/8	10/ to 15/	£1 and found	20/–25/ found	7/ to 12/
Gore	..	..	4 0 0	2 8 0	2 8 0	2 8 0	3 0 0	3 0 0	2 8 0	2 8 0	..	..	1 16 0	10/
Wyndham	..	..	..	..	2 0 0	..	2 10 0	3 0 0	2 8 0	2 2 0	0 15 0	..	1 2 6	10/

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No. 13.

NUMBER of MACHINES employed in ALLUVIAL and QUARTZ MINING, and the VALUE thereof, for the Year ending 31st December, 1904.

District.	Machinery employed in Alluvial Mining.													Machinery employed in Quartz-mining.								Approximate Value of all Mining Plant included in this Return.
	Steam-engines employed winding, crushing, &c.		Puddling-machines.	Whims.	Whips or Pulleys.	Sluices, Toms, and Sluice-boxes.	Water-wheels.	Hydraulic Hose.	Pumps.	Dredges.	Quicksilver and Compound Cradles.	Derricks.	Stamp-heads crushing Cement.	Boring-machines.	Steam-engines employed winding, crushing, &c.		Crushing-machines.	Stamp-heads.	Water-wheels.	Whims.	Whips or Pulleys.	Derricks.	Berdans.	
	No.	Aggregate h.p.													No.	Aggregate h.p.								
AUCKLAND—																								£
Paeroa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	1,342	11	305	10	..	..	..	..	149,710
Coromandel ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	24	706	..	168	5	..	..	..	..	94,896
Thames	..	..	..	..	..	..	..	..	..	..	..	..	..	..	27	1,252	29	462	25	..	..	..	145	179,800
Te Aroha	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20	3	..	..	..	..	..
Waihi	..	..	..	..	..	..	..	..	..	..	..	..	..	..	26	5,000	4	345	9	..	..	..	..	287,640
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	93	8,300	44	1,300	52	..	..	..	145	712,046
MARLBOROUGH—																								
Wakamarina ..																								
Cullen's Creek ..		..	..	..	..	15	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1,000
Waikakaho ..																								
Blenheim ..	..	..	..	..		2	..	1	..	1	..	..	..	..	..	..	2	20	..	..	..	..	..	7,000
Totals ..	..	..	..	..	..	17	..	1	..	2	..	..	..	..	..	..	2	20		..	..	..	..	8,000
NELSON—																								
Wangapeka ..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	10,000
Collingwood ..	..	..	..	..	..	4	..	10	..	..	..		..	..	2	16	2	28	1	..	..	..	..	55,000
Takaka	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Inangahua ..	..	..	..	..	..	..	..	..	..	6	..	..	..	..	30	800	22	440	28	2	3	..	65	216,362
Charleston ..	..	..	..	..	..	..	6	..	..	..	..	..	23	..	..	..	..	..	..	..	..	..	..	400
Lyell	..	..	..	..	..	88	..	6	..	7	..	..	..	..	..	..	2	30	2	..	..	..	..	35,000
Murchison ..	..	..	..	..	..	465	1	10	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	25,000
Westport	..	..	..	..	..	35	5	20	..	..	..	..	17	..	..	..	3	14	3	..	..	..	..	6,500
Ahaura	..	..	..	..	..	700	..	500	..	16	..	1	..	..	1	..	2	11	2	..	..	..	..	100,000
Totals ..	..	..	..	..	..	1,295	12	547	..	33	..	1	40	..	33	816	31	523	36	2	3	..	65	448,262
WESTLAND—																								
Stafford	..	..	..	3	6	6,000	6	100	4	1	5	..	..	..	..	..	..	..	..	..	..	..	..	40,000
Ross	..	..	..	..	..	20	..	11	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	6,000
Hokitika and Kanieri	..	..	..	..	..	55	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	7,000
Greymouth ..	..	..	..	..	..	170	..	596	25	4	16	2	..	2	..	..	..	..	..	..	..	..	..	52,290
Kumara	1	4	..	..	..	150	2	90	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	25,000
Totals ..	1	4	..	3	6	6,395	8	797	29	14	21	2	..	2	..	..	..	..	..	..	..	..	..	130,290
OTAGO AND SOUTHLAND—																								
Tapanui	..	..	..	..	..		..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2,000
Hindon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	16	1	5	..	..	..	..	..	710
Tuapeka	..	..	..	..	..	500	..	40	..	18	..	..	..	..	2	16	3	15	2	..	..	..	..	80,000
Cromwell	..	..	..	..	..	..	..	10	..	26	..	..	..	..	4	30	4	30	1	..	..	..	..	153,875
Clyde and Alexandra																								
Roxburgh ..		..	..	..	..	1,000	2	26	..	52	..	..	..	..	..	..	2	15	..	1	1	..	..	400,000
Black's																								
Orepuki, Waiau, and Roundhill Preservation	3	80	..	..	..	139	..	106	8	..	..	..	..	1	1	14	14	10	2	..	..	..	..	6,000
Waikaia (Switzers)	..	..	..	..	..	150	..	8	..	12	..	..	..	..	..	..	..	..	..	..	..	..	..	48,000
Arrow	1	4	..	..	..	20	..	12	2	2	..	1	..	1	1	4	1	10	..	..	..	..	1	15,000
Queenstown ..	..	..	..	..	..	400	..	50	2	2	..	..	..	..	1	8	5	75	..	..	..	..	..	35,000
Naseby																								
Kyeburn and Clarke's																								
Hamilton's and Sowburn																								
Hyde and Fullerton's																								
Macrae's, Strath Taieri, and Shag Valley	6	35	29	..	..	128	..	83	1	1	1	..	..	..	4	47	7	46	5	..	..	..	..	63,150
Serpentine ..																								
St. Bathan's, Ida Valley, &c.																								
Gore	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2,000
Totals ..	10	119	29	..	..	2,337	2	335	13	115	1	1	..	2	15	135	37	206	10	1	1	..	1	805,735

SUMMARY.

Auckland	..	..	..	..	..	..	..	..	..	..	..	..	..	93	8,300	44	1,300	52	..	..	..	145	712,046
Marlborough ..	..	..	..	..	..	17	..	1	..	2	..	..	..	..	..	2	20	..	..	..	..	..	8,000
Nelson	..	..	..	..	..	1,295	12	547	..	33	..	1	40	..	33	816	31	523	36	2	3	..	65	448,262
Westland	1	4	..	3	6	6,395	8	797	29	14	21	2	..	2	..	..	..	..	..	..	..	..	..	130,290
Otago	10	119	29	..	..	2,337	2	335	13	115	1	1	..	2	15	135	37	206	10	1	1	..	1	805,735
Totals ..	11	123	29	3	6	10,044	22	1,680	42	164	22	4	40	4	141	9,251	114	2,049	98	3	4	..	211	2,104,333

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No. 14.

TABLE showing approximately the NUMBER, DESCRIPTION, and VALUE of the WATER-RACES, TAIL-RACES, DAMS, RESERVOIRS, and GROUND-SLUICES in Operation during the Year ending 31st December, 1904.

District.	Water-races.				Tail-races.		Dams.		Reservoirs.		Ground-sluices.		Approximate Total Cost.
	No.	Length in Miles.	No. of Sluice-heads.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	
AUCKLAND—				£		£		£		£		£	£
Coromandel ..	6	6	21	4,500	..	..	3	510	3	50	..	..	5,060
Thames.. ..	19	25	160	58,000	7	360	70	770	2	5,000	..	..	64,130
Te Aroha ..	1	3	15	3,000	..	..	1	200	..	..	..	..	3,200
Paeroa	166	197	2,451	120,946	1	1,000	35	5,000	3	3,000	..	..	129,946
Waihi	17	38	379	..	..	..	20	..	..	..	..	..	..
Totals ..	208	269	3,026	186,446	8	1,360	129	6,480	8	8,050	..	..	202,336
MARLBOROUGH—													
Blenheim ..	31	27	154	3,970	9	165	6	..	..	..	..	..	4,135
Havelock ..	11	11	25	417	..	..	..	..	..	..	15	90	507
Totals ..	42	38	179	4,387	9	165	6	..	..	..	15	90	4,642
NELSON—													
Wangapeka, Baton, and Sherry	2	4	2	250	2	100	..	..	..	..	1	50	400
Collingwood ..	107	127	1,129	158,039	69	7,945	74	10,994	..	..	..	..	176,978
Inangahua ..	518	412	3,700	164,873	546	52,457	624	23,436	..	..	..	..	240,766
Charleston ..	80	160	800	3,000	40	200	40	4,000	..	..	..	..	7,200
Westport ..	254	169	1,383	16,634	190	25,907	405	14,190	..	..	..	..	56,731
Lyell	108	98	280	9,300	25	2,500	22	2,250	..	..	..	..	14,050
Murchison ..	253	200	1,022	10,125	74	2,650	61	3,760	..	..	..	..	16,535
Ahaura	200	420	1,700	160,000	90	18,000	90	3,000	..	..	..	..	181,000
Motueka ..	2	3	10	1,000	1	60	2	70	..	..	..	..	1,130
Takaka	8	5	47	2,300	6	100	8	160	..	..	6	..	2,560
Totals ..	1,482	1,598	9,573	525,521	1,043	109,919	1,326	61,860	..	..	7	50	697,350
WESTLAND—													
Hokitika & Kanieri	327	223	416	157,825	133	3,740	318	3,460	..	..	..	..	165,025
Ross	143	119	590	67,000	57	900	25	7,500	..	..	6	700	76,100
Kumara ..	200	115	526	5,833	198	7,020	71	4,850	11	7,000	80	600	25,303
Greymouth ..	509	448	2,088	21,791	820	19,603	1,031	14,084	..	..	..	..	55,478
Okarito	14	15	104	6,180	1	24	2	70	..	..	1	30	6,304
Stafford.. ..	230	310	550	25,000	200	8,000	300	5,000	6	1,000	2	3,000	42,000
Totals ..	1,423	1,230	4,274	283,629	1,409	39,287	1,747	34,964	17	8,000	39	4,330	370,210
OTAGO AND SOUTHLAND—													
Hindon	25	25	100	5,000	5	70	3	350	..	..	5	30	5,450
Tuapeka ..	330	920	1,850	18,000	400	9,000	320	8,500	..	..	..	..	35,500
Tapanui ..	1	2	4	100	..	..	..	..	..	..	..	..	100
Clyde, Alexandra, Black's, and Roxburgh	618	1,436	2,600	85,000	330	15,000	157	18,000	3	10,000	..	..	128,000
Arrow	107	180	216	14,608	127	4,733	24	1,350	..	..	..	..	20,686
Cromwell ..	573	1,482	2,300	105,685	312	14,678	241	11,300	..	..	..	..	131,663
Waikaia ..	230	400	800	40,000	200	2,000	120	2,400	..	..	10	400	44,800
Riverton and Orepuki	138	201	741	23,591	13	4,695	51	1,647	..	..	..	..	29,933
Queenstown ..	167	225	821	54,075	158	9,920	42	1,745	..	..	..	..	65,740
Naseby													
Kyeburn & Clarke's													
Hamilton's and Sowburn													
Hyde & Fullerton's													
Macrae's, Strath Taieri, and Shag Valley	1311	3,161	4,654	75,542	766	23,730	368	19,720	..	..	..	..	118,992
Serpentine ..													
St. Bathan's and Ida Valley													
Wyndham ..	3	9	20	1,500	..	..	..	..	..	..	..	..	1,500
Gore	2	2	28	100	..	..	..	..	..	..	..	..	100
Totals ..	3,475	8,043	14,134	423,196	2,311	83,826	1,326	65,012	3	10,000	15	430	582,464

SUMMARY.

Auckland	208	269	3,026	186,446	8	1,360	129	6,480	8	8,050	..	..	202,336
Marlborough ..	42	38	179	4,387	9	165	6	..	..	..	15	90	4,642
Nelson	1,482	1,598	9,573	525,521	1,043	109,919	1,326	61,860	..	..	7	50	697,350
Westland	1,423	1,230	4,274	283,629	1,409	39,287	1,747	34,964	17	8,000	39	4,330	370,210
Otago	3,475	8,043	14,134	423,196	2,311	83,826	1,326	65,012	3	10,000	15	430	582,464
Totals ..	6,630	11,178	31,186	1,423,179	4,780	234,557	4,534	168,316	28	26,050	76	4,900	1,857,002

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No. 15.

RETURN of CASES in the WARDENS' COURTS, and COSTS AWARDED, for the Year ending 31st December, 1904.

District.	Number of Mining Disputes adjudicated on.	Aggregate Amount of Value.		Amount of Costs awarded.	Cases wherein Judgment has decreed Specific Performance.
		Claimed.	Recovered.		
AUCKLAND—		£ s. d.	£ s. d.	£ s. d.	
Coromandel	14	169 3 4	6 7 0	4 18 0	..
Thames	33	485 17 8	274 4 0	40 10 6	..
Te Aroha	21	99 16 1	58 7 0	2 4 0	..
Paeroa	114	322 19 3	108 3 10	14 9 0	..
Waihi	69	67 9 10	48 17 10	30 12 0	..
MARLBOROUGH	4	12 6 3	10 2 6	2 4 0	2
NELSON—					
Inangahua	10	341 10 0	3 0 0	21 0 0	9
Collingwood	3	395 5 9	5 12 6	1 15 0	5
Lyell and Murchison	2	3 8 9	3 8 9	1 12 0	..
Westport	40	930 10 6	818 8 0	41 9 6	..
Charleston	4	10 5 0	..	6 7 0	..
Takaka	2	10 8 0	..	1 18 0	1
Wangapeka	..	..	..	..	..
WESTLAND—					
Kumara	18	161 5 9	110 4 0	3 0 0	..
Greymouth	13	3,262 1 2	220 2 2	87 2 8	..
Hokitika and Kanieri	22	279 10 10	247 15 4	51 15 3	..
Stafford	5	801 6 3	250 0 0	24 5 0	..
Ross	..	..	..	..	..
Ahaura	32	325 4 0	174 7 6	14 0 0	..
Okarito	..	..	..	..	..
CANTERBURY—					
Ashburton	..	..	..	..	..
OTAGO AND SOUTHLAND—					
Tapanui	..	..	..	..	..
Hindon	..	..	..	..	..
Tuapeka	7	27 10 6	6 11 3	0 10 0	..
Cromwell	2	5 1 3	5 1 3	1 2 0	1
Roxburgh	20	2,040 6 8	39 1 0	105 5 0	1
Black's					
Clyde and Alexandra ..					
Waikaia	6	50 0 0	15 0 0	10 0 0	..
Orepuki, Longwood, and Riverton ..	5	97 14 6	23 7 6	3 15 0	..
Arrow (Wakatipu Goldfield) ..	11	10 7 6	6 10 0	2 8 3	3
Queenstown	10	63 3 9	63 3 9	5 13 0	4
Gore	6	112 0 0	110 0 0	3 18 6	..
Mount Ida	59	412 15 0	7 5 0	21 2 0	48
Wyndham	..	..	..	..	..
Totals	532	10,447 7 7	2,610 0 2	502 10 8	74

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No. 16.

RETURN of the NUMBER of MINING LEASES or LICENSES in Force on the 31st December, 1904, the EXTENT of GROUND LEASED or held under LICENSE, and RENTAL per ANNUM.

Mining Leases.

District.	No.	Gross Acreage.	Rental per Annum.
		A. R. P.	£ s. d.
AUCKLAND—			
Coromandel	85	3,174 2 28	257 18 0
Thames	112	6,052 2 20	1,223 18 6
Te Aroha	..	.. ..	..
Paeroa	56	2,833 2 16	799 19 0
Puhipuhi	17	429 0 0	56 15 0
Waihi	62	5,184 3 8	1,322 13 0
MARLBOROUGH—			
Havelock	4	414 0 30	58 10 3
Blenheim	9	537 2 34	191 15 0
NELSON—			
Collingwood	3	938 3 4	234 15 0
Inangahua	172	6,834 3 3	1,188 3 6
Charleston	23	583 0 0	77 17 6
Ahaura	200	8,700 0 0	1,600 0 0
Lyell	40	1,259 0 25	348 7 0
Murchison	43	1,218 1 22	390 0 0
Westport	27	824 2 0	217 7 6
Motueka	2	31 3 33	12 0 0
Nelson	3	225 0 0	84 15 0
WESTLAND—			
Hokitika and Kanieri	57	774 1 4	214 7 6
Kumara	52	632 3 0	240 7 6
Greymouth	50	4,485 0 0	1,338 10 0
Ross	41	1,972 0 0	753 9 6
Okarito	15	739 0 0	132 8 6
OTAGO AND SOUTHLAND—			
Cromwell	110	3,102 0 0	427 8 9
Wyndham	2	18 0 0	6 10 0
Waikaia	36	1,356 0 0	350 0 0
Black's	114	4,959 0 0	1,536 7 6
Clyde and Alexandra			
Roxburgh			
Naseby	124	1,752 0 2	517 0 0
Arrow (Wakatipu Goldfield) ..	320	1,094 0 15	410 0 0
Queenstown	409	1,500 2 38	562 10 0
Riverton and Orepuki	43	2,129 2 20	45 15 0
Totals	2,231	63,756 2 22	14,599 8 6

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Statement of Affairs of Mining Companies, as published in accordance with the Mining Companies Acts, 1891, 1894, and 1900

Name of Company.	Date of Registration.	Subscribed Capital.	Amount of Capital actually paid up.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares allotted.	Amount paid up per Share.	Arrears of Calls.	Number of Shareholders at present.	Number of Men employed.	Quantity and Value of Gold or Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid.	Amount of Debts owing by Company.
										Quantity.	Value.			
AUCKLAND DISTRICT.														
		£	£	£		£ s. d.	£			Oz.	£	£	£	£
Big Beetle Gold-mining Co. (No Liability) ..	31/7/01	5,000	1,483	250	100,000	0 0 4	126	117	1	251	755	2,347	..	..
Bunker's Hill Gold-mining Co. (Ltd.)	21/6/95	18,000	11,000	6,000	80,000	5/ & 3/	..	375	5	5,182	15,777	26,215	1,325	43
Coromandel Freehold Proprietary Gold-mining Co. (No Liability)	11/11/95	18,750	313	..	150,000	0 0 0½	..	172	..	..	..	11,348	..	15
Coronation Gold-mining Co. (Ltd.)	17/8/04	5,000	736	250	100,000	2d. & 1d.	55	98	4	..	..	438	..	3
Golden Belt Gold-mining Co. (Ltd.)	12/8/02	20,000	13,358	5,250	198,369	Various	11	172	12	..	..	14,088	..	30
Golden Spark Gold-mining Co. (No Liability) ..	17/12/03	2,000	243	..	48,000	0 0 1	..	26	2	60	171	569	..	..
Harbour View Gold-mining Co. (No Liability) ..	15/4/03	1,925	1,644	..	73,900	0 0 5	76	87	6	185	483	2,796	..	4
Hardy's Mines (Ltd.)	6/5/04	20,000	11,855	8,000	40,000	0 10 0	145	57	28	101	267	9,670	..	..
Hauraki Freeholds (Ltd.)	25/1/99	20,000	1,275	..	400,000	0 0 9	..	372	14	1,300	4,001	4,196	..	85
Hauraki No. 2 Gold-mining Co. (No Liability) ..	10/7/95	12,000	7,226	..	18,175	0 2 6	..	12	2	..	27	7,755	..	1
Kuranui Gold-mining Co. (Ltd.)	12/9/95	22,394	8,428	3,450	89,575	0 2 8	13	101	9	..	848	8,219	..	79
Mahara Royal Gold-mining Co. (Ltd.)	9/4/03	5,132	2,875	1,500	102,637	Various	152	174	10	1,143	3,456	7,762	..	1,430
May Queen Extended Gold-mining Co. (No Liability)	12/11/95	15,000	7,506	..	95,500	0 1 10⅘	155	82	3	..	1,566	8,636	..	6
New Chelmsford Gold-mining Co. (Ltd.) ..	18/9/03	1,294	1,157	..	31,056	0 0 10	138	37	10	258	459	1,516	..	48
New Eclipse Gold-mining Co. (Ltd.)	9/9/03	10,000	3,958	5,000	100,000	0 0 9½	..	112	8	300	868	4,078	..	76
New Maratoto Gold-mining Co. (Ltd.)	3/10/04	5,000	..	2,500	100,000	..	..	11	6	386	90	648	..	73
New May Queen Gold-mining Co. (Ltd.) ..	13/10/04	5,250	1,313	..	105,000	0 0 3	..	254	5	..	..	1,546	..	393
New Moanataiari Gold-mining Co. (Ltd.) ..	6/6/04	5,000	1,042	..	100,000	0 0 2½	..	168	12	408	1,119	2,916	..	540
New Monowai Gold-mining Co. (Ltd.)	4/10/04	7,500	2,450	..	100,000	6d. & 3d.	50	77	4	..	..	2,381	..	401
New Saxon Gold-mining Co. (Ltd.)	15/5/04	4,792	1,198	..	95,832	0 0 3	..	169	9	83	231	1,779	..	374
New Una Gold-mining Co. (Ltd.)	10/9/03	3,901	1,313	125	49,300	7d.,6d.,4d.	29	98	5	88	224	1,268	..	20
Old Alburnia Gold-mining Co. (Ltd.)	25/7/03	11,000	5,927	..	110,000	0 1 1	31	189	20	20	59	6,498	..	355
Old Hauraki Gold-mining Co. (Ltd.)	31/3/03	12,500	2,224	8,000	100,000	5d. & 6d.	401	89	4	1,652	5,038	11,798	1,250	634
Pride of Waihi Gold-mining Co. (Ltd.) ..	15/1/01	50,000	1,666	1,250	100,000	0 0 7	1	234	2	..	..	1,467	..	24
Rising Sun Gold-mining Co. (No Liability) ..	16/10/95	18,000	4,023	1,900	89,484	0 1 2⅘	..	47	..	..	..	3,957	..	12
Royal Oak Gold-mining Co. (Ltd.) ..	22/3/04	12,500	..	6,875	100,000	..	..	37	45	2,859	7,847	6,711	..	420
Sunbeam Gold and Silver Mining Co. (Ltd.) ..	30/6/03	11,257	3,084	667	153,850	11d. & 1/4	4	100	2	..	..	2,917	..	93
Tairua Broken Hills Gold-mining Co. (Ltd.) ..	12/7/99	14,550	14,550	..	145,500	0 2 0	..	147	50	32,473	58,302	53,761	22,891	417
Te Puke Gold Reefs (Ltd.)	14/5/98	11,122	11,122	..	101,478	2/6 & 2/2½	..	111	1	..	..	11,239	4,545	117
Victoria Gold-mining Co. (No Liability) ..	2/9/90	16,722	..	..	110,829	0 3 5½	..	176	10	..	13,391	27,835	..	..
Waihi Beach United Gold-mining Co. (No Liability)	12/10/98	7,000	..	3,188	140,000	0 1 0	169	183	8	..	..	3,321	..	102
Waihi Consolidated (Ltd.)	28/3/00	25,000	1,875	15,000	100,000	0 3 4½	3	141	1	..	..	3,154	..	..
Waihi Consols Gold-mining Co. (Ltd.)	27/5/03	12,500	1,918	2,500	98,060	4d. & 5d.	133	84	4	..	..	1,406	..	..
Waihi Extended Gold-mining Co. (Ltd.) ..	12/8/95	149,967	17,913	5,498	149,967	0 3 1½	21	423	8	..	..	18,275	..	230
Waihi South Gold-mining Co. (Ltd.)	21/6/04	32,181	1,071	22,527	128,725	0 3 8	2	160	..	..	..	289	..	48
Waihui Gold-mining Co. (Ltd.)	7/12/00	2,250	1,627	..	60,000	0 0 7½	40	35	..	..	..	1,646	..	6
Waimangu Gold-mining Co. (Ltd.)	1/12/04	6,750	1,000	2,500	90,000	6d. & 1/	..	103	4	..	..	..	..	64
Waiotahi Gold-mining Co. (Ltd.)	1/8/71	18,000	15,000	..	6,000	2 10 0	..	58	9	..	193,079	156,593	40,500	45
		619,237	168,373	102,230	3,961,237	..	1,755	5,088	323	46,749	308,058	430,340	70,511	6,188

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Name of Company.	Date of Registration.	Subscribed Capital.	Amount of Capital actually paid up.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares allotted.	Amount paid up per Share.	Arrears of Calls.	Number of Shareholders at present.	Number of Men employed.	Quantity and Value of Gold or Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid.	Amount of Debts owing by Company.
										Quantity.	Value.			
NELSON DISTRICT (INCLUDING WEST COAST).														
		£	£	£		£ s. d.	£			Oz.	£	£	£	£
A1 Gold-dredging Co. (Ltd.)	13/11/99	8,500	6,700	..	8,500	1 0 0	..	127	7	3,441	13,428	21,049	2,125	1,548
Addison's Long Tunnel Gold-mining Co. (Ltd.)	24/9/98	1,500	1,413	83	1,500	1 0 0	9	24	4	1,498	5,915	7,020	177	77
Amikitea Gold-dredging Co. (Ltd)	20/3/01	12,500	9,603	2,500	12,500	1 0 0	398	104	..	646	2,486	13,185	..	1,848
Atlas Prospecting and Gold-mining Co. (Ltd.) ..	4/8/02	21,000	460	..	21,000	0 0 5½	21	19	..	..	..	468	..	..
Belle Vue Gold-dredging Co. (Ltd.)	17/10/02	3,400	3,380	1,000	3,400	1 0 0	..	12	12	363	1,416	1,918	..	1,959
Bignell's No Town Gold-dredging Co. (Ltd.) ..	10/4/00	9,000	4,840	4,160	9,000	1 0 0	..	131	9	1,407	5,450	9,758	900	..
Big River Gold-mining Co. (Ltd.)	11/4/91	12,000	9,725	..	24,000	0 8 3	293	60	12	24,975	100,426	66,410	47,366	707
Blackwater River Gold-dredging Co. (Ltd.) ..	27/4/00	9,475	8,892	3,000	9,475	0 18 0	..	115	9	3,034	12,170	18,340	3,316	..
Britannia Gold-mining Co. (Ltd.)	3/3/99	10,000	1,934	7,160	20,000	0 7 1¾	..	24	11	2,283	8,938	7,993	2,592	58
Craig's Freehold Gold-dredging Co. (Ltd.) ..	20/8/00	6,500	4,126	2,500	9,000	0 14 0	431	116	10	1,009	3,908	4,985	..	2,062
Daylight Gold-dredging Co. (Ltd.)	15/5/00	6,000	4,243	1,899	7,899	1 0 0	177	93	..	..	..	3,770	..	84
Garden Gully Gold-mining Co. (Ltd.)	8/8/01	13,883	3,871	9,018	22,900	Various	499	233	6	4	16	2,815	..	129
Greenstone Junction Gold-dredging Co. (Ltd.) ..	22/9/99	7,500	7,500	1,500	12,000	0 15 0	..	129	8	2,901	11,229	19,301	..	1,505
Greenstone Sluicing Co. (Ltd.)	22/1/89	7,000	2,703	2,300	7,000	0 11 6	..	29	..	4,036	15,868	19,078	1,925	50
Horse Terrace Sluicing Co. (Ltd.)	2/8/04	5,000	2,688	2,000	5,000	20/ & 15/	363	13	16	..	..	2,601	..	266
Keep-it-Dark Quartz-mining Co. (Ltd.) ..	2/3/74	20,000	6,208	10,000	20,000	0 16 2½	..	52	53	93,978	361,079	239,834	138,917	55
Kells' Sluicing Co. (Ltd.)	7/4/02	2,850	2,850	1,250	4,100	1 0 0	..	15	3	21	80	3,410	..	451
Kohikohi Gold-dredging Co. (Ltd.)	27/5/00	14,667	11,946	2,500	14,667	1 0 0	143	114	16	2,001	7,689	21,169	..	1,583
Macleod's Terrace Sluicing and Water-distributing Co. (Ltd.)	4/4/03	14,535	7,720	..	14,535	1 0 0	112	38	4	..	..	7,457		
Mineral Belt Copper-mining Co. (Ltd.) ..	12/11/03	14,395	2,341	10,000	14,395	20/ 5/	88	34	13	..	..	2,098	..	50
Minerals (Ltd.)	13/6/03	6,628	3,853	2,550	26,512	0 5 0	29	98	4	..	340	4,098	..	1,144
Minerva Gold-mining Co. (Ltd.) ..	24/2/90	12,000	6,428	400	17,285	0 6 3	..	18	1	821	2,947	11,108	..	37
Mokoia Gold-dredging Co. (Ltd.)	21/4/99	9,000	7,750	1,250	9,000	1 0 0	..	188	8	4,617	17,536	23,066	1,925	..
Mont d'Or Gold-mining and Water-race Co. (Ltd.)	25/7/82	12,000	10,800	..	12,000	0 18 0	..	30	18	28,800	112,513	82,944	39,000	..
Montgomery's Terrace Hydraulic Sluicing Co. (Ltd.)	28/9/00	17,500	11,714	5,500	22,900	1 0 0	10	149	11	388	1,533	20,830	..	2,592
Moonlight Gold-dredging Co. (Ltd.)	7/5/00	7,750	7,574	2,250	9,783	1 0 0	..	103	8	1,054	4,171	13,295	..	1,574
Nelson Creek Gold-dredging Co. (Ltd.) ..	1/7/99	8,500	6,000	2,500	8,500	1 0 0	..	80	12	11,678	46,415	38,884	23,364	289
New Feddersen Gold-dredging Co. (Ltd.) ..	1/8/04	2,313	2,313	..	4,625	0 10 0	..	18	9	688	2,699	3,724	809	213
New Kohinoor Gold-dredging Co. (Ltd.) ..	25/11/04	1,931	1,099	..	1,931	0 7 6	78	28	9	..	..	304	..	922
New Lyell Sluicing Co. (Ltd.)	26/8/04	1,740	263	1,000	1,740	8/ & 4/	23	18	5	..	..	282	..	129
New Scotia Gold-mining Co. (Ltd.)	22/5/00	12,000	8,203	3,000	24,000	0 10 0	179	122	1	1,576	4,727	13,147	..	257
New Shetland Terrace Sluicing Co. (Ltd.) ..	20/5/04	1,805	1,099	..	1,805	0 12 6	29	41	4	112	448	571	..	..
Newton River Hydraulic Sluicing Co. (Ltd.) ..	19/12/02	13,615	3,538	10,004	13,615	20/ 10/ 6/8	..	8	12	1,594	6,160	8,394	..	47
New Trafalgar Dredging Co. (Ltd.)	13/4/04	2,246	2,036	2,000	4,246	1 0 0	210	47	..	..	..	1,068	..	1,219
New Woodstock Dredging Co. (Ltd.)	25/7/03	3,000	2,750	..	3,000	1 0 0	..	18	1	629	2,433	4,844	..	165
North Beach Gold-dredging Co. (Ltd)	27/2/00	6,225	6,225	2,100	8,325	1 0 0	..	97	8	4,053	15,755	19,294	3,330	215
No Town Creek Gold-dredging Co. (Ltd.) ..	8/3/00	8,500	8,500	3,500	12,000	1 0 0	..	136	10	6,514	25,161	23,157	10,799	343
Parapara Hydraulic Sluicing and Mining Co. (Ltd.)	18/6/92	50,600	26,210	20,000	40,600	20/ 12/ 5/	150	63	20	7,172	27,539	54,248	..	..
Prince of Wales Dredging Co. (Ltd.)	17/10/99	10,000	9,914	4,000	14,000	1 0 0	86	94	8	1,985	7,783	17,828	..	172
Reeves's Proprietary Gold-dredging Co. (Ltd.) ..	19/10/99	14,200	11,700	2,500	14,200	1 0 0	..	253	18	3,335	13,093	29,527	606	212
Rocklands Beach Gold-dredging Co. (Ltd.) ..	1/9/99	11,672	9,872	1,800	11,672	1 0 0	..	125	8	2,313	9,080	19,272	..	802
Slate River Gold-dredging Co. (Ltd.)	12/3/04	1,353	1,353	100	1,453	1 0 0	..	52	10	503	1,866	1,959	..	298

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										Quantity.	Value.			
NELSON DISTRICT (INCLUDING WEST COAST)—*continued*.														
		£	£	£		£ s. d.	£			Oz.	£	£	£	£
Slate River Sluicing Co. (Ltd.)	26/7/00	14,680	14,647	1,200	13,480	1 0 0	33	85	..	921	3,684	16,562	..	..
Takaka Sluicing Co. (Ltd.)	28/1/01	5,395	5,395	3,725	9,120	1 0 0	..	44	12	2,478	9,297	13,692	2,736	15
Three-mile (Greenstone Creek) Dredging Co. (Ltd.)	15/9/99	6,500	6,500	1,500	8,000	1 0 0	..	105	10	3,371	13,046	19,285	400	421
Totara Flat Gold-dredging Co. (Ltd.)	21/2/03	5,007	950	2,411	5,007	1 0 0	13	51	8	1,082	3,997	5,145	..	2,400
Ulster Gold-mining Co. (Ltd.)	20/4/04	7,500	1,363	450	30,000	0 1 3	100	86	2	..	..	1,320	..	31
United Gold-mines (Ltd.)	20/4/04	7,500	373	..	30,000	0 0 4	..	45	2	230	846	1,189	..	22
Wairau Valley Gold-mining Co. (Ltd.)	25/5/04	2,014	812	9,085	44,396	1/10 & 1/	62	90	4	..	..	585	..	694
Westland Water-supply, Electric Power, and Gold-dredging Co. (Ltd.)	8/10/00	3,836	3,003	12,000	3,838	0 16 0	67	31	1	..	..	4,233	..	1
Totals	..	466,717	285,280	155,695	647,904	..	3,603	3,805	417	227,461	883,117	926,534	280,289	26,146
OTAGO DISTRICT (INCLUDING SOUTHLAND).														
Alexandra Bonanza Gold-dredging and Sluicing Co. (Ltd.)	5/9/99	27,000	17,086	3,000	21,398	1 0 0	330	140	6	331	1,168	19,902	..	412
Alexandra Eureka Gold-dredging Co. (Ltd.) ..	14/11/99	12,000	..	12,000	12,000	1 0 0	..	30	14	7,367	28,108	16,723	10,950	163
Alexandra Lead Gold-dredging Co. (Ltd.) ..	26/7/99	17,521	14,521	3,000	17,521	1 0 0	..	195	8	6,418	24,850	24,642	14,032	229
Alpine No. 2 Gold-dredging Co. (Ltd.)	1/5/99	6,220	6,220	825	6,220	1 0 0	..	123	1	2,938	11,366	12,160	3,416	47
Argyle Gold-dredging Co. (Ltd.)	24/12/02	6,000	6,000	..	6,000	1 0 0	..	11	10	2,295	9,082	13,003	900	..
Arrow Falls Gold-mining Co. (Ltd.)	4/4/98	30,500	2,342	27,750	30,500	20/ & 4/	8	33	12	1,397	5,396	8,476	..	129
Bakery Flat Sluicing Co. (Ltd.)	10/9/96	2,500	2,013	300	2,500	0 18 6	4	28	..	2,604	9,785	10,918	1,063	340
Barewood Gold-mining Co. (Ltd.)	24/12/03	8,000	7,000	6,000	8,000	0 10 0	..	41	21	2,683	10,298	9,987	2,800	105
Central Charlton Dredging Co. (Ltd.)	8/12/99	5,300	5,300	1,700	7,000	1 0 0	..	111	8	3,787	14,766	17,147	2,800	..
Champion Gold-mining Co. (Ltd.)	30/12/98	10,000	4,382	..	10,000	0 10 0	13	64	7	2,208	8,459	22,481	500	1,003
Charlton Creek Gold-dredging Co. (Ltd.) ..	5/5/99	4,000	4,000	1,000	5,000	1 0 0	..	75	9	4,515	17,481	20,711	4,120	180
Chicago Gold-dredging Co. (Ltd.)	1/11/99	2,500	6,750	2,500	5,000	1 0 0	..	68	7	4,132	16,087	13,691	..	197
Clutha River Gold-dredging Co. (Ltd.)	31/3/04	2,300	950	1,000	2,300	0 15 0	25	42	3	33	150	1,000	..	412
Clyde Dredging Co. (Ltd.)	17/5/95	6,000	5,850	150	6,000	1 0 0	..	82	8	12,197	46,954	33,848	20,600	265
Crewe Gold-dredging Co (Ltd.)	7/9/02	2,000	1,600	3,000	5,000	0 16 0	..	13	7	1,154	4,413	6,143	..	113
Cromwell Gold-dredging Co. (Ltd.)	10/10/98	5,300	5,300	1,700	7,000	1 0 0	..	147	16	10,891	..	26,127	20,825	159
Deep Stream Amalgamated Hydraulic Sluicing Co. (Ltd.)	4/2/97	8,500	8,500	3,500	12,000	1 0 0	..	57	14	5,933	22,847	30,707	7,744	46
Doctor's Point Gold-dredging Co. (Ltd.) ..	11/2/01	60	30	..	602	0 1 0	30	8	..	..	..	30	..	12
Dunstan Lead Gold-dredging Co. (Ltd.) ..	31/5/99	7,500	17,489	3,000	17,500	..	..	201	8	4,853	18,799	27,925	4,369	204
Earnscleugh Gold-dredging Co. (Ltd.)	15/7/01	8	8	10,992	11,000	1 0 0	..	9	33	14,236	55,050	37,064	4,950	1,398
Electric Gold-dredging Co. (Ltd.)	2/9/99	26,000	..	26,000	26,000	1 0 0	..	268	18	34,474	134,027	33,069	96,843	2,179
Enfield Gold-dredging Co. (Ltd.)	31/10/99	5,000	5,000	2,000	7,000	1 0 0	..	62	7	3,118	12,406	15,406	1,575	189
Enterprise Gold-dredging Co. (Ltd.)	24/8/91	7,000	3,500	3,500	7,000	1 0 0	..	140	14	16,870	65,339	42,827	28,846	223
Enterprise Water-race Co. (Ltd.)	7/2/67	4,800	4,800	..	16	300 0 0	..	7	3	7,413	28,234	28,868	13,581	233
Ettrick Gold Steam-dredging Co. (Ltd.) ..	29/8/90	9,000	8,366	2,000	10,500	1 0 0	..	113	8	8,003	30,804	34,352	4,718	239
First Chance Dredging Co. (Ltd.)	28/6/02	3,500	3,500	3,500	7,000	1 0 0	..	151	1	2,266	7,777	8,356	3,150	107
Gabriel Gold-dredging Co. (Ltd.)	12/6/00	3,350	2,315	2,150	5,290	1 0 0	..	56	7	3,407	13,140	15,537	958	698

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										Quantity.	Value.			
OTAGO DISTRICT—*continued*.														
		£	£	£		£ s. d.	£			Oz.	£	£	£	£
Garden Gully Dredging Co. (Ltd.)	14/8/03	2,600	2,600	..	2,600	1 0 0	..	32	9	498	1,894	4,417	..	175
Golden Bed Dredging Co. (Ltd.)	5/5/99	11,000	10,694	2,000	12,794	1 0 0	..	200	8	4,663	18,141	18,750	1,269	273
Golden Crescent Sluicing Co. (Ltd.)	26/11/98	3,500	3,500	..	3,500	1 0 0	..	27	8	3,280	12,708	10,463	5,513	76
Golden Gate Dredging Co. (Ltd.)	13/3/95	2,500	2,500	..	2,500	1 0 0	..	53	7	12,316	47,429	26,094	22,625	192
Golden Run Dredging Co. (Ltd.)	29/6/91	9,000	9,414	1,600	11,000	1 0 0	..	147	12	14,242	54,831	54,866	9,594	1,172
Golden Treasure Dredging Co. (Ltd.)	11/7/93	1,500	1,384	1,500	3,000	1 0 0	..	42	8	10,883	41,899	29,511	14,596	658
Gordon Gold-dredging Co. (Ltd.)	27/2/03	14	14	1,000	1,014	1 0 0	..	7	7	691	2,697	3,001	..	253
Hartley and Riley Beach Dredging Co. (Ltd.) ..	14/7/97	6,500	6,300	200	6,500	1 0 0	..	343	9	26,889	104,017	27,429	79,625	463
Hessey's Gold-dredging Co. (Ltd.)	22/7/02	5,000	3,700	1,300	5,000	1 0 0	..	76	8	1,912	7,536	3,416	2,250	..
Hit or Miss Water-race Co. (Reg.)	19/6/67	..	..	..	..	20 0 0	..	3	..	..	..	..	..	..
Inchdale Gold-dredging Co. (Ltd.)	8/2/00	5,500	5,023	1,500	7,000	1 0 0	..	89	7	2,471	9,335	11,912	643	289
Island Block Gold-dredging and Sluicing Co. (Ltd.)	26/2/00	24,030	12,030	12,030	25,000	1 0 0	..	89	13	4,772	18,576	24,142	..	344
Junction Electric Gold-dredging Co. (Ltd.) ..	2/9/99	26,000	..	26,000	26,000	1 0 0	..	317	8	13,819	53,476	33,007	20,150	357
Junction Waikaka Gold-dredging Co. (Ltd.) ..	10/10/00	5,100	4,940	1,900	7,000	1 0 0	160	42	8	410	1,578	7,787	..	1,500
Jutland Hydraulic Dredging Co. (Ltd.) ..	28/6/01	5,000	4,100	900	5,000	1 0 0	..	8	7	1,421	5,425	10,612	..	950
Kia Ora Victoria Gold-dredging Co. (Ltd.) ..	10/8/01	9,100	5,915	..	9,100	0 13 0	..	34	16	6,308	25,587	24,546	7,053	..
Lady Annie Gold-dredging Co. (Ltd.)	29/11/04	4,200	14	4,186	4,186	1 0 0	..	16	8	143	554	737	..	678
Lady Roxburgh Gold-dredging Co. (Ltd.) ..	3/3/00	9,000	4,586	2,000	11,000	1 0 0	..	123	8	2,114	8,128	10,240	1,984	244
Ladysmith Gold-dredging Co. (Ltd.)	19/4/00	12,000	3,964	3,000	14,500	0 10 0	..	86	8	2,289	8,812	10,814	1,985	239
Last Chance Hydraulic Sluicing, Elevating, and Dredging Co. (Ltd.)	27/7/99	9,950	4,655	3,300	9,950	0 14 0	..	103	11	1,730	5,322	7,511	977	..
Livingstone Creek Gold-dredging Co. (Ltd.) ..	22/12/02	3,500	3,493	..	3,500	1 0 0	7	24	8	1,071	3,984	7,960	..	688
Local Industry Gold-mining Co. (Ltd.) ..	21/10/91	1,500	1,300	..	1,500	0 17 4	..	13	4	4,027	15,501	15,379	2,288	180
Loch Lomond Gold-dredging Co. (Ltd.) ..	20/2/03	2,475	1,975	500	2,475	1 0 0	..	69	7	391	1,510	3,876	..	111
Lone Star Dredging Co. (Ltd.)	15/3/02	720	600	..	720	0 16 8	..	15	10	1,719	6,731	7,037	360	153
MacCharlton Gold-dredging Co (Ltd) ..	6/10/00	6,000	2,545	..	6,000	..	26	38	8	1,869	7,242	11,835	..	694
Majestic Gold-dredging Co. (Ltd.)	31/7/99	6,500	5,700	800	6,500	1 0 0	..	10	7	3,058	11,815	16,487	1,300	368
Manuherikia Gold-dredging Co. (Ltd.)	1/8/99	6,000	6,000	6,000	12,000	1 0 0	..	•186	8	11,160	42,644	21,726	25,787	96
Manuka Mining Co. (Ltd.)	26/5/04	200	200	..	200	1 0 0	..	7	8	43	167	670	..	204
Masterton Gold-dredging Co. (Ltd.)	6/1/04	5,000	3,500	1,500	5,000	1 0 0	..	62	8	698	2,719	4,364	1,000	..
Matakanui Gold-mining Co. (Ltd.)	22/1/02	7,000	7,000	7,000	7,000	1 0 0	..	8	7	1,486	5,650	5,069	350	200
Matau Dredging Co. (Ltd.)	16/10/97	6,200	6,200	800	7,000	1 0 0	..	123	8	8,596	33,127	22,666	14,875	120
Milk Creek Freehold (Ltd.)	27/11/03	4,000	4,000	..	80	50 0 0	..	29	7	377	1,462	5,817	..	359
Molyneux Hydraulic Dredging Co. (Ltd.) ..	25/5/00	5,896	5,896	..	5,896	1 0 0	..	91	7	9,459	28,630	34,814	5,602	388
Molyneux Kohinoor Dredging Co. (Ltd.) ..	27/1/00	7,325	5,059	2,300	9,130	£1 & 18/6	..	170	..	1,999	7,739	10,963	1,370	..
Mount Buster Mining Co. (Ltd.)	20/4/96	6,480	..	4,320	216	20 0 0	..	13	3	2,263	8,716	3,530	5,292	403
Mount Morgan Sluicing Co. (Ltd.)	2/7/02	800	800	2,000	2,800	1 0 0	..	7	4	549	2,113	2,892	..	29
Muddy Creek Sluicing Co. (Ltd.)	2/11/01	1,120	1,120	725	1,845	1 0 0	..	26	9	2,692	10,503	9,385	788	808
Mystery Flat Gold-dredging Co. (Ltd.) ..	16/7/00	5,512	4,512	1,000	5,512	1 0 0	..	103	8	2,988	11,694	14,075	1,929	..
Naseby Dredging and Hydraulic Sluicing Co. (Limited)	16/10/97	5,000	2,287	2,000	5,000	0 15 3	..	24	6	3,124	12,025	13,614	2,500	269
New Alpine Consols Dredging Co. (Ltd.) ..	8/7/02	3,750	3,750	8,750	7,500	0 10 0	..	1,126	1	1,375	5,245	7,114	927	57
New Bendigo Gold-dredging Co. (Ltd.) ..	3/2/03	4,400	4,400	2,200	6,600	1 0 0	..	178	1	485	1,882	6,691	..	1,558

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STATEMENT of AFFAIRS of MINING COMPANIES, as published in accordance with the Mining Companies Acts, 1891, 1894, and 1900—*continued*.

Name of Company.	Date of Registration.	Subscribed Capital.	Amount of Capital actually paid up.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares allotted.	Amount paid up per Share.	Arrears of Calls.	Number of Shareholders at present.	Number of Men employed.	Quantity and Value of Gold or Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid.	Amount of Debts owing by Company.
										Quantity.	Value.			
OTAGO DISTRICT—*continued*.														
		£	£	£		£ s. d.	£			Oz.	£	£	£	£
New Fourteen Mile Beach Gold-dredging Co. (Ltd.)	17/3/04	4,194	4,194	..	4,798	0 17 6	..	98	8	1,776	6,864	5,308	3,954	99
New Golden Beach Hydraulic Elevating and Dredging Co. (Ltd.)	12/12/03	3,000	2,510	..	3,000	1 0 0	6	52	9	540	2,108	4,760	..	4,441
New Golden River Gold-dredging Co. (Ltd.) ..	21/4/04	1,500	1,495	..	3,000	0 10 0	5	57	..	76	292	1,748	..	61
New Half-way House Gold-dredging Co. (Ltd.) ..	25/11/01	8,000	4,000	4,000	8,000	1 0 0	..	157	7	1,236	4,798	4,687	800	47
New Lafranchi Dredging Co. (Ltd.)	26/1/04	2,500	1,124	2,500	3,369	£1 & 5s.	13	41	7	40	157	893	..	926
New Maori Point Gold-dredging Co. (Ltd.) ..	22/8/04	1,498	1,383	115	1,498	1 0 0	236	34	7	125	479	1,112	..	480
New Monte Christo Dredging Co. (Ltd.) ..	21/7/04	1,500	676	..	1,500	1 0 0	84	34	1	26	102	654	..	66
New Perseverance Gold-dredging Co. (Ltd.) ..	21/4/04	14,000	..	14,000	14,000	1 0 0	..	127	20	1,302	5,025	5,501	..	379
New Roxburgh Jubilee Dredging Co. (Ltd.) ..	22/1/02	2,500	2,500	5,000	7,500	0 12 6	..	170	8	6,118	23,771	10,435	14,241	358
New Skipper's Sluicing Co. (Ltd.)	16/9/02	3,414	811	811	3,414	1 0 0	..	24	6	440	1,676	4,140	..	75
Ngapara No. 3 Gold-dredging Co. (Ltd.) ..	13/9/99	5,000	5,000	2,000	7,000	1 0 0	..	78	7	1,861	6,662	12,487	..	763
Nokomai Hydraulic Sluicing Co. (Ltd.) ..	26/3/98	24,000	7,000	17,000	2,400	10 0 0	..	40	38	10,547	40,318	38,608	13,884	884
Nugent Wood Dredging Co. (Ltd.)	24/11/02	3,000	2,450	550	3,000	1 0 0	..	39	8	1,285	5,134	6,141	1,050	401
O'Brien's Patent Hydraulic Gold-dredging Co. (Ltd.)	18/3/00	750	750	250	1,000	1 0 0	..	7	..	148	568	2,057	200	..
Olrig Dredging Co. (Ltd.)	13/3/99	7,000	6,000	1,000	7,000	1 0 0	..	72	8	4,482	17,491	19,740	3,825	225
Otago Gold-dredging Co. (Ltd.)	20/5/95	5,000	2,000	3,000	5,000	1 0 0	..	66	13	10,012	38,545	34,578	6,875	253
Ourawera Gold-mining Co. (Ltd.)	23/5/95	3,000	3,000	..	3,000	1 0 0	..	17	11	6,961	27,543	21,537	9,415	..
Paterson's Freehold Gold-mining Co. (Ltd.) ..	15/7/99	8,000	7,592	4,000	12,000	0 19 0	8	29	16	..	20,517	27,956	2,400	2,625
Phœnix Dredging Co. (Ltd.)	27/9/02	1,500	1,500	..	30	50 0 0	..	15	7	1,922	7,645	8,805	1,200	114
Phœnix Water-race Co. Ltd. (Reg.)	12/10/67	1,500	1,500	..	1,000	1 10 0	..	18	1	..	..	935	7,432	..
Punt Gold-dredging Co. (Ltd.)	10/11/04	1,750	1,094	1,250	1,750	0 12 6	..	27	9	..	..	1,028	..	310
Revival Gold-dredging Co. (Ltd.)	27/8/03	2,600	1,300	600	2,600	0 13 0	..	16	8	1,046	4,063	4,590	325	117
Riley's Beach Gold-dredging Co. (Ltd.) ..	22/2/01	8,625	7,311	4,500	9,000	1 15 0	..	119	8	2,761	10,643	18,080	3,460	17
Rise and Shine Gold-dredging Co. (Ltd.) ..	24/2/00	10,000	9,746	2,000	12,000	1 0 0	254	186	10	6,222	23,916	35,529	300	300
Rising Sun Gold-dredging Co. (Ltd.)	16/2/01	8,000	5,500	2,500	8,000	1 0 0	..	83	10	1,886	7,278	13,468	..	484
Round Hill Mining Co. (Ltd.)	30/7/02	28,245	6,753	21,492	5,649	5 0 0	..	180	30	19,771	78,778	92,350	847	877
Roxburgh Amalgamated Mining and Sluicing Co. (Ltd.)	2/3/89	29,152	13,091	15,000	29,152	1 0 0	31	160	18	19,865	77,183	70,098	21,498	891
Royal Waimumu Gold-dredging Co. (Ltd.) ..	6/10/00	5,500	5,330	..	5,500	1 0 0	4	46	10	3,128	12,432	15,259	2,305	367
Sailor's Bend Dredging Co. (Ltd.)	1/9/99	8,000	6,500	1,500	8,000	1 0 0	..	183	8	2,528	9,771	13,518	2,791	275
Sailor's Gully (Waitahuna) Gold-mining Co. (Ltd.)	3/6/96	2,000	100	1,800	2,000	0 10 0	..	10	4	1,925	7,109	5,688	1,600	41
Sandy Point Gold-dredging Co. (Ltd.)	20/2/03	8,000	8,000	..	8,000	1 0 0	..	74	9	2,827	10,978	16,242	2,000	565
Scandinavian Water-race Co. (Reg.)	1868	12,000	12,000	..	240	50 0 0	..	21	23	..	..	..	15,660	5,407
Sheddon's Waikaka Freehold Gold-dredging Co. (Ltd.)	26/4/00	4,318	4,318	2,182	6,500	1 0 0	..	25	..	4,474	17,282	23,065	6,500	130
Shotover Quartz-mining Co. (No Liability) ..	6/3/98	7,245	7,066	1,500	28,980	0 5 0	105	43	12	1,634	6,268	11,586	..	959
Smith Gold-mining Co. (Ltd.)	19/10/98	1,700	1,700	300	2,000	1 0 0	..	18	5	897	3,544	5,407	..	135
Success Gold-dredging Co. (Ltd.)	16/7/97	2,400	2,400	..	2,400	1 0 0	..	23	7	7,375	28,426	21,189	9,900	220
Sunshine Dredging Co. (Ltd.)	24/8/03	..	..	8,000	8,000	..	..	165	..	93	359	8,055	..	243
Tallaburn Hydraulic Sluicing Co. (Ltd.) ..	3/12/04	1,200	1,200	..	12	100 0 0	..	7	6	70	268	1,284	120	..

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STATEMENT of AFFAIRS of MINING COMPANIES, as published in accordance with the Mining Companies Acts, 1891, 1894, and 1900—*continued*.

Name of Company.	Date of Registration.	Subscribed Capital.	Amount of Capital actually paid up.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares allotted.	Amount paid up per Share.	Arrears of Calls.	Number of Shareholders at present.	Number of Men employed.	Quantity and Value of Gold or Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid.	Amount of Debts owing by Company.
										Quantity.	Value.			
OTAGO DISTRICT—*continued*.														
		£	£	£		£ s. d	£			Oz.	£	£	£	£
Taniwha Gold-dredging Co. (Ltd.)	19/12/02	700	700	..	700	1 0 0	..	8	7	1,478	5,670	5,156	1,190	136
Tinker's Gold mining Co. (Ltd.)	10/6/02	15,000	15,000	15,000	15,000	1 0 0	..	16	8	2,085	8,026	7,744	3,750	..
Undaunted Gold-mining Co. (Ltd.)	1/3/98	15,000	15,000	..	1,500	10 0 0	..	31	9	7,228	28,049	15,449	10,875	366
Unity Gold-dredging Co. (Ltd.)	8/8/00	4,200	4,200	..	10,500	1 0 0	..	123	7	4,496	17,253	10,747	6,100	100
Upper Waipori Alluvial Gold-dredging Co. (Ltd.)	3/9/89	3,440	1,713	1,667	4,800	16/8&12/2	..	77	9	16,399	62,794	49,635	14,280	418
Victoria Gold-mining Co. (Ltd.)	19/5/03	1,000	750	..	1,000	0 15 0	..	7	3	54	202	63	..	10
Vinegar Hill Hydraulic Sluicing Co. (Ltd.) ..	23/9/00	6,000	6,000	..	6,000	1 0 0	..	12	7	..	4,688	4,042	..	50
Waikaia Gold dredging Co. (Ltd.)	20/10/03	1,750	1,750	1,750	3,500	1 0 0	6	33	9	211	824	2,513	..	856
Waikaka Gold-dredging Co. (Ltd.)	9/5/00	4,900	4,628	1,600	6,500	1 0 0	..	58	8	2,968	12,135	14,230	980	181
Waikaka Kia Ora Gold-dredging Co. (Ltd.) ..	10/7/03	5,000	..	5,000	5,000	..	..	15	7	375	1,488	1,526	..	295
Waikaka Queen Gold-dredging Co. (Ltd.) ..	6/7/99	5,510	5,495	1,050	5,510	1 0 0	8	92	8	2,998	12,468	17,432	1,119	118
Waikaka Syndicate (Ltd.)	20/12/01	3,000	2,700	4,000	7,000	0 18 0	..	17	8	2,101	8,315	10,756	2,100	300
Waikaka United Gold-dredging Co. (Ltd.) ..	11/2/99	4,700	4,700	6,500	11,200	1 0 0	..	22	16	6,796	26,166	30,871	5,320	5
Waimumu Gold-dredging Co. (Ltd.)	29/11/97	6,000	6,000	1,000	7,000	1 0 0	..	84	8	5,565	21,755	24,592	3,235	247
Waimumu Queen Gold-dredging Co. (Ltd.) ..	21/6/99	5,200	4,672	1,800	7,000	0 18 0	9	60	8	1,984	7,700	12,118	1,225	99
Waipori Consolidated Gold Dredges (No Liability)	22/3/99	2,500	2,275	225	2,500	1 0 0	..	7	7	3,019	11,715	12,508	1,813	285
Waitahuna Dredging Co. (Ltd.)	22/2/02	1,380	1,380	..	1,380	1 0 0	..	23	..	605	2,330	3,867	488	..
Totals	..	789,602	523,349	374,320	845,837	..	1,377	9,680	1,037	519,574	1,985,351	1,836,049	661,324	49,221
Grand totals	..	1,875,556	972,002	632,245	5,454,978	..	6,735	18,573	1,777	793,784	3,176,526	3,219,923	1,012,124	81,555

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STATEMENT of AFFAIRS of MINING COMPANIES, as defined by Section 2 of "The Mining Companies Acts Amendment Act, 1897," and published in accordance with "The Mining Companies Acts Amendment Act, 1897."

Name of Company.	Date of Registration of Office in Colony.	Subscribed Capital.	Amount of Capital actually paid up in Colony.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares on Colonial Register.	Amount paid up per share: Colonial Register.	Arrears of Calls: Colonial Register.	Number of Shareholders on Colonial Register.	Number of Men employed in Colony.	Quantity and Value of Gold or Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid in Colony.	Amount of Debts owing by Company.
										Quantity.	Value.			
AUCKLAND DISTRICT.														
		£	£	£		£ s. d.	£ s. d.			Oz.	£	£	£	£
Arrindell Syndicate (Ltd.)	10/12/03	4,300	..	12,000	5,000	1 0 0	..	4	7	..	..	2,000	..	500
New Zealand Crown Mines Co. (Ltd.)	27/6/96	200,000	..	100,000	43,877	1 0 0	..	123	204	216,008	516,487	481,550	12,224	2,279
Waihi Grand Junction Gold Co. (Ltd.) ..	22/12/97	240,000	3,113	112,500	5,665	1 0 0	23 0 0	36	46	..	..	98,689	..	..
Waitaia Gold-mines (Ltd.)	16/7/96	76,207	..	20,000	20,181	1 0 0	..	121	18	5,880	17,615	23,845	..	306
Totals	..	520,507	3,113	244,500	74,723	..	23 0 0	284	275	221,888	534,102	606,084	12,224	3,085
OTAGO DISTRICT.														
Premier Sunrise (N.Z.) Gold-mining Co. (Ltd.)..	11/4/02	2,500	..	2,500	..	..	..	..	13	4,018	15,045	16,516	..	..
Totals	..	2,500	..	2,500	..	..	..	..	13	4,018	15,045	16,516	..	..
Grand Totals	..	523,007	3,113	247,000	74,723	..	23 0 0	284	288	225,906	549,147	622,600	12,224	3,085

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1905.
NEW ZEALAND.

INSPECTION OF COAL-MINES REPORT.

("THE COAL-MINES ACT, 1891.")

Presented to both Houses of the General Assembly by Command of His Excellency.

No. 1.

Mr. J. HAYES, F.S.Sc., Inspecting Engineer, to the UNDER-SECRETARY, Mines Department.

SIR,— Mines Department, Wellington, 3rd May, 1905.

I have the honour to submit reports on the coal-mines of the colony for the year ended 31st December, 1904.

OUTPUT.

The following summary shows the output of the various classes of coal and lignite mined in each inspection district :—

Class of Coal, &c.	Northern District.	West Coast District.	Southern District.	Total.
	Tons.	Tons.	Tons.	Tons.
Bituminous and semi-bituminous coal ...	106,219	832,299	...	938,518
Pitch-coal	...	2,397	22,109	24,506
Brown coal	136,298	2,254	345,306	483,858
Lignite	...	...	90,956	90,956
Totals	242,517	836,950	458,371	1,537,838

The total number of mines at work during the year was 168, of which number 24 provide employment for over twenty persons at each mine, whilst 45 mines employ over four but not more than twenty persons at each. The relatively large proportion of small mines is due to the fact that these properties are being worked for the supply of local requirements only, and include several at which fuel is obtained on private lands solely for the requirements of the owners, who are, for the most part, farmers who quarry a few tons of lignite from time to time.

In comparison with the output for the year 1903, the foregoing statement shows a net total increase of 117,609 tons.

The statement given below shows the relative increase and decrease in the output of the various classes of coal, &c., in each of the inspection districts :—

Class of Coal, &c.	Northern District.		West Coast District.		Southern District.		Total Increase.	Total Decrease.	Total Net Increase.
	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.			
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Bituminous and semi-bituminous coal	4,700	...	53,927	...	...	...	...	...	...
Pitch-coal	...	...	2,397	...	993	...	..	...	...
Brown coal ...	28,022	...	...	406	14,428	...	...	...	...
Lignite	...	...	...	...	13,584	...	...	...	...
Oil-shale	...	...	...	...	...	36	...	...	...
Totals ...	32,722	...	56,324	406	29,005	36	118,051	442	117,609

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The approximate total quantity of coal, &c., raised from the several mines throughout the colony up to the 31st December, 1904, is returned at 20,115,663 tons.

The number of persons ordinarily employed at all the mines is returned at 763 above ground, and 2,525 below ground, making a total of 3,288. At a considerable number of lignite-pits in Otago and Southland (Southern District) the workings are open quarries, and the persons employed thereat are included in the number of persons employed above ground.

The output of coal, &c., for the year averaged 467·7 tons per person employed in connection with the coal-mining industry. As compared with coal-mining generally in other parts of the world, this average is decidedly high, but is accounted for by the fact of thick seams being the rule rather than the exception in this colony. This gives natural facilities for a higher ratio of production than is the case where thin seams are worked under infinitely less advantageous conditions.

Accidents.

Four fatalities in connection with coal-mining operations occurred during the year, all of which were duly inquired into by the Department. The proportion of fatal accidents in relation to the number of persons employed is at the rate of 1 to 822, and in relation to the tonnage of coal won as 1 to 384,459·5 tons.

Two other deaths occurred which can scarcely be classed as fatal mining accidents, and are therefore not taken into account in the foregoing comparisons. In one case now under notice a trucker slipped on a rail and hurt his knee. An operation was performed and death from blood-poisoning, subsequent to the operation, occurred some three weeks after the accident. In the other case a miner returning from his work had an epileptic fit, and died a few hours afterwards.

Taken all round, the proportion of fatalities at collieries compares most favourably with those in many other works which are looked upon as far less hazardous, and which are not carried on under such disadvantageous circumstances. This, in itself, is testimony to the careful supervision of working-conditions day by day and the provisions made for safety. Underground mining cannot be conducted with perfect immunity from accidents, but with the exercise of proper care on the part of officials and workpeople these can be, and are, very considerably minimised.

Prosecutions.

No prosecutions for breaches of "The Coal-mines Act, 1891," or special rules thereunder, have been instituted by the Department during the year.

Colliery managers have, in some instances, taken action against employees for violation of the law relating to the safety of persons employed, and in so doing have done their duty.

Ventilation of Mines.

On the whole, there is now comparatively little fault to be found in this respect. It is being recognised that good ventilation pays, and at nearly all the principal collieries mechanical ventilation by means of fans is adopted. The great advantages of fan-ventilation as compared with that by furnace are: (*a*) that the first cost is often less, (*b*) greater economy in work and maintenance, (*c*) increased safety, (*d*) better control, and (*e*) greater capacity for circulating the air-currents, and therefore more effective.

Furnace ventilation is only really effective and reasonably economical at mines working by the means of fairly deep shafts, and even under such conditions the fan is preferable. For the shallow mine-workings which are general in New Zealand, there is no question whatever as to the superiority of the fan (as compared with the furnace) in every way.

Many small mines are ventilated naturally, no power of any kind being installed. As these are non-gaseous, and only a very few persons are employed, requirements are fairly well met. At others, a small furnace, a steam-jet, or the heat from steam-pipes supplying an underground pump is found to be sufficient to induce a reasonably adequate supply of air. There are a few cases, however, where mines of the kind now referred to may be reasonably expected to extend operations, and even now are practically at the limit of real efficiency as regards their means of ventilation. To meet such requirements, a fan, with a capacity of some 20,000 cubic feet per minute (the actual volume attainable may be more or less according to the conditions existing in the mine), together with engine for driving, can be installed for a trifle over £100, foundations included. This places mechanical ventilation within the reach of owners of small mines at very little cost, assuming that steam is available. Where water under pressure can be easily obtained, a Pelton wheel may be used for driving, the wheel being keyed direct to the fan shaft if volume and pressure of water are such as will maintain a suitable speed, otherwise the connection must be made by means of belt and pulleys. In any case, the first cost would be less than for a steam-driven fan, provided that the initial cost of bringing the water to the work has not to be specially undertaken. An installation of this kind could be advantageously adopted at many metalliferous mines.

Drainage of Mines.

At the Westport Coal Company's collieries (which are at a high altitude) drainage is provided for by means of adits driven from valleys situate to the dip of the workings. This practice obviates the necessity for heavy pumping machinery, and, in the event of pumps being required in the future to drain coal-areas further to the dip than the level of the drainage tunnels, the height to which the water

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will have to be lifted will only be that necessary for discharge into the aforesaid tunnels or adits. A similar provision is being made at Blackball Colliery, and when completed will enable the present electrically driven pumps to be dispensed with, or utilised for the drainage of areas at a lower level than that commanded by the new water adit.

In two instances—viz., at Castle Hill Colliery, Kaitangata, and the Alexandra Coal Company's mine, Alexandra South—mine pumps are worked by endless ropes, but the most general method adopted is that of the direct-acting pump, placed underground and driven by steam, compressed air being used in some cases. In a few instances single-cylinder installations are at work, but the favourite type appears to be the duplex pattern, generally with high-pressure cylinders and worked non-condensing, the exhaust steam-pipe being led into the sump, although in a few cases the simple condenser referred to in the report of last year has been advantageously adopted. At Abbotsford Colliery, Green Island (Freeman's Coal Company), the duplex pump there is fitted with compound steam cylinders.

Pumps worked by electricity have been installed at Allandale Colliery. The Cornish type of pump is not in use at any of the New Zealand collieries at the present time.

Compressed Air in Mines.

The use of compressed air as a secondary power in mines is being gradually extended. The direct use of steam is only practicable to a somewhat limited extent, and when motive power is required in the inner workings of mines, compressed air and electricity offer the greatest facilities for successful application. Of these two agencies, compressed air is so far the most favoured in this colony, and is very freely used at the Westport Coal Company's collieries for working coal-cutting machinery, rock-drills, underground subsidiary haulages, &c., and at the collieries of the New Zealand Coal and Oil Company (Limited), at Kaitangata, for the purposes of pumping and hauling, the steep inclination of the coal-seams there necessitating the employment of quite a number of small dip-haulage plants. A small air-compressor has also been erected at the Taupiri Extended Colliery, Huntly. One beneficial feature in connection with the use of compressed air at collieries is that the exhaust assists the ventilation to some extent. The air may also be used direct from the main pipes for the purpose of temporarily ventilating a heading.

Electricity in Mines.

So far, the principal use of electricity at New Zealand collieries is for the lighting of engine-houses, workshops, offices, sidings above and below ground, &c.; but for power purposes it has not yet been so generally adopted as might have been expected. For some time, electrically driven coal-cutting machinery was used by the Westport Coal Company, but was not found to answer requirements so well as compressed air. The use of electricity for this purpose was therefore abandoned. For haulage purposes it answered admirably, but as the generating plant was subsequently moved and utilised for lighting purposes the electric motor used for hauling was necessarily displaced, and an engine worked by compressed air substituted.

At Blackball Colliery a pumping plant, placed underground, is worked electrically with satisfactory results. At Allandale Colliery electric plant has been installed for haulage underground, pumping, and driving the ventilating-fan. Electricity has also been adopted at Kaitangata Colliery for driving the ventilating-fan, and, owing to the distance of the upcast shaft from the main surface-works, considerable economy is effected thereby as compared with the expense entailed in working the steam plant formerly in use. The latter, however, remains in position, and is used once a fortnight to insure its being always kept in good order. At the same time, this fortnightly use of steam-power enables the electrical plant to be periodically examined and overhauled without stoppage of mining operations.

There is no doubt that electricity is a very useful, efficient, and convenient medium for conveying power for working various classes of machinery underground. For coal-cutting machinery it does not appear—on the basis of experience in this colony and in other parts of the world—to have hitherto been so generally suitable as compressed air, local conditions no doubt accounting for this in a great measure, but year by year improvements are being made in the motors used for working coal-cutters, and it is therefore more than probable that in the near future the difficulties experienced in the past will be entirely overcome.

For the purposes of hauling, pumping, and working ventilating machinery, electricity is now a powerful rival to compressed air, and for such uses will more than hold its own. In comparison with compressed air, an electrical installation of equal power is less costly, the cable conveying the current takes less room than the pipes conveying compressed air; it is also much more easily laid and generally more handy than pipes. To these considerations must be added the fact that for a given horse-power exerted by the primary motor (steam or water), electricity as a secondary power is proved to give a much higher percentage of useful effect than can be obtained from the use of compressed air.

New Collieries.

Puponga.—In the early part of the year coal from the Puponga Colliery (near Collingwood) was put on the market on a commercial scale. The seam being worked is about 7 ft. 6 in. thick, and yields an excellent household coal, which is also well spoken of for steaming purposes. Harbour facilities are not yet so favourable as could be desired, and therefore the tonnage which can be shipped in one bottom is limited, but by dredging a channel from deep water to the wharf, and a basin large enough for vessels to swing round when coming to their berthage, there will be no difficulty in loading very much larger steamers than are now employed. The bottom to be dredged is of such a nature that the work can be done without great difficulty. The coal appears to find a ready market in Nelson, Wellington, and the coastal towns of the southern portion of the North Island.

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Point Elizabeth.—The Point Elizabeth Colliery, Greymouth (New Zealand State Coal-mines), also became a producing property during the year, the seam operated upon being known as the Main (or Exhibition) seam. The primary use of this coal is for the supply of the New Zealand Government railways, but a portion of the output is also sold to the public.

Drury.—Towards the latter end of the year operations were put in hand for opening a new colliery about two miles and a half from the railway-station at Drury, near Auckland. To a limited extent some coal was worked in this locality several years ago. The seam to be operated upon is reported to be 15 ft. in thickness, but at the time of my visit the prospecting shaft was full of water, and therefore I had no opportunity of seeing the seam except at the outcrop where the thickness is not so great. The coal is a brown coal of very fair quality, suitable for local requirements, and is being opened by a level tunnel. Arrangements have been made to ventilate the mine from the first by means of a fan of approved type. Connection with the railway at Drury is being made by means of a substantial tramway to be worked by locomotive-power.

Proposed new Collieries.

Ngakawau.—A lease of coal-bearing land, 1,577 acres in extent, lying at the back of the Westport Coal Company's Granity Creek leasehold (Millerton Colliery), has been issued to Mr. G. L. Tacon, and it is intended to form a company to open up and work the property. As the land in question is at an altitude somewhat greater than that held by the Westport Coal Company, connection with the railway near where it crosses the Ngakawau River will have to be made by an incline tramway. The quality of the coal is similar to that worked at Millerton Colliery, and as a matter of fact the seam is a continuation (beyond the eastern boundary of the Granity Creek leasehold) of that now being worked from Millerton.

Paparoa.—Messrs. W. H. Cutten and H. Neilsen have been granted a lease to mine coal over an area of 1,000 acres of land near the southern end of the Paparoa Ranges, the property being some two or three miles from Blackball Township; and comprehensive prospecting and careful surveys have disclosed an extensive field of coal comprised within the leasehold. A large number of outcrops have been exposed, and the average thicknesses of the several seams are reported as under: No. 1, 10 ft. 6 in.; No. 2, 18 ft.; No. 3, 9 ft.; No. 4, 5 ft.; No. 5, 10 ft.; No. 6, 10 ft. 6 in.: making an average total of 63 ft. of coal. Having inspected the property, and examined the prospecting done and outcrops exposed, I see no reason to doubt the estimate of Mr. F. Cutten, C.E. (authorised surveyor), who was in charge of the work, as to the extent of coal contained in the six seams discovered. The quality of the coals is remarkable, the following analyses by the Government Analyst showing that Nos. 1 and 2 seams may be classed among the anthracite coals, whilst the remaining seams appear to be fully equal to the very best coals yet mined in any part of the West Coast coalfields, and superior to the average production:—

	1.	2.	3.	5.	6.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Fixed carbon	80·05	79·10	77·2	75·55	70·00
Hydrocarbon	15·10	15·05	19·0	22·75	24·35
Water	0·65	1·85	0·6	0·70	0·85
Ash	4·20	4·00	3·2	1·00	4·80
	100·00	100·00	100·00	100·00	100·00
Total sulphur	0·37	0·23	0·26	0·29	0·19
Evaporative power by standard usually adopted in New Zealand	10·40	10·28	10·04	9·82	9·10
Ditto in New South Wales	17·61	17·40	16·98	16·62	15·40

The coals of the lower seams (Nos. 1, 2, and 3) are practically smokeless, and should be eminently suitable for use in ocean-going steamers generally.

The area under notice being on the side of a mountain range a colliery can be opened level-free, and the coal conveyed by means of a self-acting cable haulage road, about two miles in length (at a fairly easy gradient) to the new branch of the Government railway about to be constructed from Ngahere to Blackball.

Examinations for Mine-managers' Certificates.

The papers set for the last examination of persons desirous of qualifying for positions as managers of coal-mines are appended.

Schedules.

The list of persons to whom managers' certificates of service and of competency have been issued is appended, as are also the statistical tables showing the output of coal, &c., from, and the numbers of persons employed at, the several mines throughout the colony.

I have, &c.

John Hayes,
Inspecting Engineer.

The Under-Secretary for Mines, Wellington.

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No. 2.

Mr. JAMES COUTTS, Inspector of Mines, Thames, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Inspector of Mines Office, Thames, 8th February, 1905.

I have the honour to transmit the following report on the coal-mines in the Auckland district for the year ended 31st December, 1904, in compliance with section 67 of "The Coal-mines Act, 1891":—

Kawakawa Mine (John Cully, manager).—The work that has been carried on in this mine during the year has been confined to working out pillars near the outcrop, and searching for pillars of coal and coal that had been left in to strengthen the roof. The old workings being completely filled in with the covering of the coal makes it very difficult to know where or how to drive to find pillars which have been left from the old mining works of years past, more especially as there is no plan to work from. The prospects are not very encouraging as it is considered the coal in sight will only last a few months, when the lessee intends to surrender the present lease. The output of coal for the year was 3,512 tons, a slight increase on the previous year's return. A total of six men were employed.

Hikurangi Coal Company (Limited).—During the year ended 1904 no new machinery has been added to the company's plant; the operations of the company have been chiefly directed to opening up that portion of their mine situated on the western side of the railway, where a large area of excellent coal has been found, and proves to be much better than at first anticipated. It was fully expected there would be a large quantity of water to contend with here as the workings would be immediately under the top end of a swamp, but, fortunately, very little water has been met with. In the eastern section the work is confined to extracting pillars, which is being done with a great amount of success, fully 90 per cent. of the coal left in the pillars being obtained. The contemplated work to be carried out during the year 1905 is to further extend the prospecting operations in the western area, which extends a distance of fully a mile and a half in the direction of the Hikurangi Swamp, where the seam has been partly proved by boring and sinking for half a mile in length and quarter of a mile in width, leaving a mile still unexplored. An opening will be made at a point between the tipping-place at the railway sidings and where the wagons are now being filled. This tunnel will enable the company to open up a large area of coal on this part of the property, from which it can be cheaply worked. A new loading-place will be made north of the present adit incline with a view to further opening up another section of the mine. A splendid quality of fireclay has lately been discovered, 30 ft. in thickness and very suitable for brickmaking. This will be worked at no distant date and at a small outlay. It is said the clay can be made into bricks and leave a good margin of profit. For some time past there has been some difficulty in obtaining water suitable for boiler purposes, and the manager now proposes bringing in a supply from the Hikurangi Mountain, a distance of a mile and a half, the cost of which he estimates will not exceed £300. The work in the mine has been very satisfactorily carried on for the safety of the men, and the ventilation has been good; but eventually, after the mine is further opened up, it will be necessary to procure other means of ventilating the workings and not depend on natural ventilation. The output of coal for the year was 44,974 tons, an increase of 5,349 tons as compared with the previous year. An average of fifty-six men were employed.

Northern Coal Company (Limited), Hikurangi.—This company's mine is situated on rising ground, and is worked from adit levels, which are being extended in the seam and opening up a large area of coal of very good quality. Owing to the ground being favourably situated there is no water to contend with in the present workings. A locomotive is used to convey the coal from the mine to the top of a self-acting incline (a distance of a mile and a quarter) where the trucks are lowered to the loading-ground on the Government railway. The locomotive engine mentioned being too light for the amount of work required to be done, and subject to frequent breakdown, thus causing serious delays, it was found to be necessary to purchase another locomotive to do the work and enable the company to increase the output. Another level is now being opened out on the outcrop at a lower elevation. It is expected this will be completed in the month of June, and from here it is expected the coal on this part of the property will be worked to greater advantage than hitherto, and at less expense. The output of coal for the year was 25,719 tons, an increase of 3,337 tons as compared with the previous year. Forty-five men were employed.

Phœnix Mine, Hikurangi (D. Kirkwood, manager).—The operations in this mine have been very limited. The small steam-engine erected to pump the water was not large enough to do the work required, and has given a good deal of trouble on account of it frequently breaking or something going wrong; but the owners, I am informed, intend to erect a larger plant to overcome this difficulty. The seam of coal is 10 ft. thick where it is at present being worked, but the lowest level is only 40 ft. below the surface, and the coal very soft, consequently it does not find as ready a sale as the coal from the other mines in the neighbourhood. Whether it will improve as it is driven on or at a depth remains to be proven. The output of coal for the year was 5,043 tons, being a slight decrease on the previous year. An average of sixteen men were employed.

Kiripaka Mine (George Clemo, manager).—This mine is worked from an adit level a few feet above the Ngunguru River. From the entrance of this level the coal is conveyed in trucks along a ground tramway by a horse for a distance of half a mile to the loading-ground, where it is put into punts and taken down the river to deep water, and there transhipped into vessels. The seam of coal has varied from 2 ft. to 18 ft. in thickness, but owing to the faulty nature of the country it has only been found in a small area, and practically most of the coal above the level named has been worked out. The company are now directing their attention to opening up a strip of two chains of coal on their boundary below the adit level. The coal to the dip is of good quality, but there is a good deal of water to contend

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with, and most likely a small engine will be required to do the pumping. The output of coal for the year was 12,604 tons, a slight increase compared with the previous year. Eighteen men were employed.

Ngunguru Mine (A. H. Taylor, manager).—This company has had considerable difficulties to contend with. The seam of coal worked during the year has averaged only some 3 ft. in thickness and is intersected by faults. The cost of mining the coal is therefore considerably greater than that of any other mine in the district; but, having some excellent fireclay on the top of the coal (which is obtained without great difficulty, and shipped to Auckland), the concern was made to pay until the month of November, when some dispute arose between the manager and the men. The directors thereupon decided to stop the mine. During the stoppage the company had a few men prospecting and boring, but they were not successful in finding coal on the property in sufficient quantities to pay for working. Work has again been resumed, but the manager's attention is directed to extracting pillars of coal which will only last for a few months. The output of coal for the year was 14,367 tons, a decrease of 3,857 tons. An average of forty-six men were employed.

Mungapapa (Mokau) Mine (Boyd Bennie, manager).—There is very little change in this mine since my last report. The working-faces are only extended a few feet to get out sufficient coal to supply the local demand, which is very limited, and the coal is not good enough to send to Wellington to compete against the West Coast coal. The bar at the mouth of the Mokau River prevents a fair-sized boat getting out with coal, hence cargoes are necessarily small. The output for the year was 4,280 tons, a decrease of 1,870 tons as compared with the previous year. Thirteen men were employed.

The Union Collieries, Maramarua (W. Tattley, manager).—The extensions of the various faces in this mine have been pushed on during the year; and, as the levels are extended under the rising ground (where there is more covering), the coal has greatly improved and is now in good demand. The greatest drawback the company has is the conveying of the coal down the river from the loading-ground at the mine to the Government railway near Mercer. It is taken down in barges, but instead of the trucks of coal (as they come out of the mine) being emptied into the barges they are lifted by a crane off the frame and wheels and placed as closely as possible on the deck. A similar method is adopted at the siding on the railway where the coal is loaded into the wagons. The barges are towed up and down the river by a small steam tug-boat. The ventilation in this mine in the early part of the year was not as good as could be desired, but on my last inspection there was nothing to complain of. The output of coal was 15,342 tons, an increase of 8,772 tons as compared with the previous year. Twenty-nine men were employed.

Taupiri Coal-mines, Huntly (E. S. Wight, manager).—This company's property may be said to be worked as three separate mines, as the workings below are not connected, although all are under the same management.

The Taupiri Reserve (Kimihia) section, two and a half miles from Ralph's, is worked from an incline adit, the most of the workings being under the lake, but for some time past nothing has been done in extending the workings or opening up the seam in this direction, the work being confined to working the bords opened up above the low level. On the east side of the incline a good deal of prospecting has been done with a view to ascertaining whether the stone in the centre of the coal would get thinner or the coal improve in quality. There is a large area of unworked coal in this direction, and, should it be found to be as good as in the other section of the mine, there would be employment for a number of men for many years.

The Taupiri Extended Mine is worked from a shaft. The operations in this section have been directed to working on that portion of the property adjacent to, and on the east side of, the Waikato River. As the workings are extended the coal is found to be of excellent quality, and the prospects are most encouraging.

The Ralph section is also worked from a shaft. The shaft is sunk on the east side of the Waikato River, near the railway-station; but the workings are now underlying land on the western side of the river, the main haulage road having been extended in this direction for a little over half a mile from the shaft. The endless-rope haulage system, which has been installed in this section for hauling the coal to the bottom of the shaft, is working very satisfactorily. The coal still continues to be of good quality as far as it has been opened up, and the supply obtained is sufficient to meet the demand.

The output of coal from the mines was 116,461 tons, an increase of 20,905 tons as compared with the previous year. There were 224 men employed.

Harrison's Mine, Huntly (Edward Davis, manager).—This mine is in what is termed the College Reserve. C. Starr and party, I am informed, have a lease and have been taking some coal out on the surface at the late Mr. Harrison's old workings. The output of coal was 215 tons, and six men were employed for a portion of the year.

Drury Colliery, Drury (R. McEwen, manager).—This mine has just recently been started. A considerable amount of boring for coal had been done by a syndicate, the success attending which had apparently encouraged them to form a company, with the object of opening up the mine and working it in a systematic manner. A small shaft was sunk, and the seam of coal, 15 ft. thick, is said to have been cut through. The company are now driving a low level from the surface to the bottom of the shaft; the drive at date is 240 ft. in length and another 40 ft. of driving will make the connection. When this is done good ventilation will be established. The mine will be drained to the depth of the level and the drive used for trucking the coal out. The strata passed through in the drive was mostly a good quality of fireclay, and required close timbering. As there are several bands of fireclay and shale running through the coal a modern screening plant is to be erected where the stone and shale will be taken out. For the purpose of utilising the fireclay the company contemplate erecting works for the manufacture of fireclay goods. The mine being situated about two miles and a quarter from Drury Railway-station a tram-line is being constructed from the station to the foot of the hill. This work is let on contract, and is drawing near completion, the rails being laid down for a mile and a half.

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A locomotive has been purchased for running between the railway-station and the foot of the hill, to which the coal will be lowered down a self-acting incline from the mine. Sixteen men are employed about the mine in addition to the contractors.

A fair amount of prospecting for coal in various parts of this district was done in the early part of the year, but I have not heard of any important discoveries having been made.

The total output of coal from all the mines in the district was 242,517 tons, an increase of 32,722 tons as compared with the previous year.

NON-FATAL ACCIDENTS IN COAL-MINES.

The following are the names of persons injured in the mines in the Auckland district who sent in claims to be placed on "The Coal-miners' Accident Relief Fund," the number of days they were absent from work, and the amount of money received: 25th January, Henry Scotman, Ngunguru, arm injured, 7 days, 14s. 7d.; 6th February, Samuel Neil, Kawakawa, arm injured, 69 days, £7 3s. 9d.; 7th March, John Mulgrove, Northern Colliery, finger injured, 16 days, £1 13s. 4d.; 21st March, D. Fitzgibbon, Ngunguru, ankle injured, 27 days, £2 16s. 3d.; 24th May, B. Fabris, Phœnix, leg broken, 109 days, £11 7s. 1d.; 27th May, James Neil, Union Collieries, finger injured, 12 days, £1 5s.; 4th June, Richard Predo, Ngunguru, head injured, 13 days, £1 7s. 1d.; 13th June, James McCormick, Ngunguru, arm injured, 11 days, £1 2s. 11d.; 4th July, E. Preston, Kiripaka, finger injured, 17 days, £1 15s. 5d.; 20th July, James H. Arthur, Union Collieries, foot injured, 19 days, £1 19s. 7d.; 17th August, John Trotter, Hikurangi, shoulder dislocated, 25 days, £2 12s. 1d.; 15th October, Robert McEwen, Phœnix, face burned, 16 days, £1 13s. 4d.; 7th November, David Cockburn, Mokau, hand injured, 66 days, £6 17s. 6d.; 21st November, Samuel Moreland, Phœnix, body burned, 122 days, £12 14s. 2d.; 25th November, Robert Richards, Hikurangi, leg burned, 116 days, £12 1s. 8d.; 14th December, Hy. Crossey Drury, foot injured, 11 days, £1 2s. 11d. Totals, 656 days, £68 6s. 8d.

The total number of days men were off work who were injured in the Taupiri Coal-mines and received the usual weekly allowance through "The Waikato Medical and Accident Society, Huntly 964 days, £100 8s. 4d. William Wilson, in satisfaction of all claims for injuries received, £50. Total, £150 8s. 4d.

I have, &c.,

JAMES COUTTS,
Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

No. 3.

Mr. ROBERT TENNENT, Inspector of Mines, Westport, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Inspector of Mines Office, Westport, 24th March, 1905.

I have the honour in compliance with section 67 of "The Coal-mines Act, 1891," to report as follows on the West Coast coal-mines for the year ending 31st December, 1904:—

Enner Glynn Coal-mine.—Prospecting has attained no further headway in the vicinity of the old mine.

Prospecting at Belgrove.—Mr. Morrison has wisely directed his attention to the better cultivation of his farm, and ceased prospecting for coal.

Motupipi Coal-mine.—Messrs. Gilmer and Nalder have recently commenced to extend an old drive formerly opened by Thomas Nalder on the west bank of the Motupipi River. The coal (brown)—so far driven on the level course—is parted in the centre by a stone band 15 in. in thickness, giving a total working-height of 5 ft. 6 in. The drive is securely timbered for a distance of 157 ft., and, should the quality and working-conditions of the seam meet anticipations, connection by road and sea are factors which will not entail extraordinary expenditure. Six men employed—two in each of the three shifts. The prospecting party are not over sanguine of success, but consider the prospect is worthy of a fair trial.

Shakespeare Bay.—Prospecting in this locality has not yet been productive of any discovery of commercial value, and operations are now stopped.

Puponga Colliery: (owners, Puponga Coal and Gold-mining Company (Limited)).—Mr. Sidney George Hayward, attorney for the company, has recently acquired all legal rights in connection with the leasehold formerly held by the Cape Coal-prospecting Company (Limited). The erection of the 'oading-jetty, storage-bins, and construction of the 24-in. gauge tram-line for locomotive traffic (referred to in my report of last year) are now satisfactorily completed and operative, as also the mechanical appliances for screening, sorting, and haulage, while the output has steadily increased during the current year to 12,430 tons. Working westward to the rise from the level near the top of the dip haulage road, considerable faulting was met and dealt with, and the increased thickness of the middle band stone has meanwhile necessitated temporary suspension of operations in that direction, pending prospecting developments now in active progress. In extending operations to the dip, quality and thickness of the coal-seam are fully maintained, affording favourable promise of an average coalfield, the coal commanding a ready market for household and steaming purposes at fairly remunerative prices. Sinking the dip incline is suspended at present in view of carrying out the work on more effective and economical lines. The old system will be abandoned and a steam-driven pump will shortly be installed. The attention of the manager having been directed to the ventilation, arrangements are now completed for the adoption of a fan. Improved facilities for shipment are also receiving expert attention. With respect to the provisions prescribed under the Coal-mines Act, including timbering, spragging, examinations and reports, the various working-conditions have been observed; and, as a further precaution to insure greater

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safety against the probability of accident by runaway trucks on the dip heading during haulage operations on the day shift, driving in the dip face will be strictly confined to a six-hour shift, afternoon and night in each twenty-four hours.

Mokihinui Colliery.—The limited operations effected by this co-operative company during the year were confined to the rise section of the property adjoining the Seddonville State Colliery, but the quality and thickness of the coal-seam having shown no marked improvement the party ultimately abandoned further operations, withdrawing incline ropes and trucks from the mine, and finally cleared out, prior to absolute starvation. With the exception of two small falls of roof where the timber had broken down, the mine was left in fair condition. Recently the mine was opened by a new party, who are simply working the old faces. Timbering and ventilation are made special features, and reports kept to date. The old mine, which has been on fire for some time, presents no change of moment.

Seddonville Colliery (New Zealand State Coal-mines, James Bishop, manager).—Operations have been continuous during the year and the output raised shows a gross tonnage of 33,808 tons. Referring to the developments completed, the chief work effected has been the extension of the main haulage tunnel, now holed with Grant's face on the north bank of the Chasm Creek. This extension gives the haulage road a total length of 145·5 chains, of which 38·5 chains is rock-driven, while 16 chains is in coal. In this coal-bearing area, regular working has been recently opened from both sides of the tunnel, and, so far as the coal-seam has been exploited in the ordinary course of operations, quality and hardness are much superior to anything obtained in the district first opened, but if reliable data may be taken from the apparently limited and faulty character of the coalfield, it would be fair to anticipate that the probable quantity of hard coal obtainable from the present workings is likely to fall short of expectations. Therefore, should further development be considered advisable to prolong the life of the mine under the conditions existing, active prospecting must be vigorously pushed to meet future demands, and it is pleasing to note that on a recent visit to the colliery the management were taking active measures to ascertain the extent and quality of the coal-seam on the south side of Chasm Creek, where they propose to carry out an efficient system of exploring drives in the various outcrops. Meanwhile the general development effected, and the extent of working opened, are sufficient to provide a daily output of 600 tons, providing the marketable value of the coal was suitable for general purposes, but under existing requirements, the trade demands do not exceed 250 tons per day. The general equipment has been maintained in good working-condition, and in view of utilising a portion of the small coal for the manufacture of coke, experiments have been carried out, giving results which are considered to be quite satisfactory. The ventilation and other provisions of the Coal-mines Act are strictly enforced. There have been no serious accidents during the year, and seven inspections were made. Timbering is systematically effected throughout the workings as the roof is chiefly an overburden of friable coal.

Millerton Colliery (owners, Westport Coal Company (Limited); George Fletcher, mining-manager).—The mining operations continue to be worked double shift, but the restricted demands on the colliery (as affected by fluctuations of trade) have tended to decrease the output 29,201 tons, compared with the previous year. Efficiency in working-conditions and general equipment are well and consistently maintained.

East Dip section: Shortly after suspension of operations, indications of heating were threatened under large falls of coal in the upper levels, but the prompt measures adopted to remove the loose coal, and restore large circulating air-currents speedily averted the probability of future danger. Brick stoppings are exclusively used.

Mine Creek section: This section has supplied the gross tonnage raised from this colliery since operations were suspended in the east dip. The ordinary and progressive developments continue in active progress. In extending the main heading southward for a total distance of 38 chains in direct line of haulage road, a fault-line was met and dealt with without apparent difficulty, and a coal-seam of excellent quality and hardness exposed. On account of its heating properties and suitability for naval purposes, the coal was specially recommended by the officer supervising coal-shipments from Westport on behalf of the British Admiralty. Other conditions of the working-faces are practically unchanged. The east crosscut reached the Ngakawau boundary at 32 chains from the main terminal, and the bords branching southward are driven from this point. It may be here stated that, apart from any special conditions mentioned in the lease, provision is made to leave a chain barrier of solid coal along the boundary-line, care being taken to drive the face accordingly, thus averting likelihood of any encroachment. West section winning heading has been extended a total driven distance of 23 chains, the face showing an unbroken line of good coal. In concluding my remarks on the general aspect of this section of the property, it may be stated that the general contour of this extensive and unbroken face affords most satisfactory promise of a valuable and profitable coalfield. Faulting, practically speaking, is not extensive when the dimensions of the field are considered.

New works: In my report of last year, mention was made that permanent concrete foundations were under construction on the low level, in order to admit of the removal of the hydraulic-brake installation then situate at the Mine Creek terminal. This work, now substantially completed and operative, has met anticipations, and the power exerted to control the motion of the rope on the surging-drum is more evenly applied. New tunnel: In connection with the active operations to win and exhaust the western section of the leasehold, the coal-seam was tapped by the rock crosscut—securely timbered to 11 ft. by 7 ft. in the clear—at a distance of 18 chains, driven in continuation of the surface tramline which was set off to junction with the main haulage at the Big-brake terminal. The coal-seam so far proved affords promise of favourable quality and thickness, and a holing effected with the original working provides efficient ventilation under direct control of the fan. To meet the additional requirements of the new tunnel district, the power-station situate at the lower mine mouth has been spaciously

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rehoused, with suitable accommodation, and the erection of a Babcock and Wilcox boiler and Leyner air-compressor is now in progress. Drainage adit: The importance of this rock crosscut for the purpose of draining the deep workings of the Mine Creek areas has received careful and prompt attention. Levels were determined, and in September last driving was commenced with hand-drills from the inbye end to junction with the outlet section, the latter being driven with rock-drills actuated by compressed air. Water is supplied under pressure to suppress the dust, the face being a hard, well-defined, grey granite.

There have been no additions to the plant at the Mine Creek power-station. The general ventilation is strictly maintained over the whole system, while the timbering of roads and faces, and the various examinations under the Coal-mines Act are made special features in the safety and economy of working operations. All reports strictly and duly kept. Seven inspections were made, and the old workings in both sections of the mine carefully examined with safety-lamp, no indications of gas or heating being found. The following observations of relative temperatures will be of interest: Surface (in the sun), 68 degrees; east intake (1 chain from day), 54 degrees; east intake (directly at face), 49 degrees; main return to fan, 54 degrees.

Denniston Collieries (owners, Westport Coal Company (Limited); J. Dixon, mining-manager).—The gross tonnage raised from these mines for the year 1904 show a decrease of 2,773 tons compared with the previous year, but it is noteworthy that notwithstanding the restricted demands on the colliery, as affecting single and double shifts, the efficient and economical development recently completed in haulage, &c., have enabled the collieries to produce the largest output yet recorded for any yearly period exclusively worked on single shift.

Coalbrookdale Mine (23/12/1904): This mine has steadily maintained its former efficiency, and active operations for the further development of the property have been consistently carried out. Respecting the geological features of the Cascade district westward, the lower section of the coal-seam is found to thin out to an almost unworkable thickness, but a corresponding increase of thickness is maintained in the upper section of the seam. Development is thus economically effected without apparent depreciation, even though the seam is divided by a considerable thickness of intervening strata. The extraction of pillars has been successfully effected in this district.

Cascade dip continues to show favourable promise in thickness and quality of seam as the workings extend dipward, whilst drainage and ventilation are effected through the coal adit driven from Cascade Creek. To meet the growing requirements mechanical haulage was recently installed on a new heading opened eastward, where a hauling-engine actuated by compressed air is permanently placed. Gas was reported in a heading-face over a large fall of top coal.

Cascade East: The solid workings having been extended riseward to the fault-boundaries, preparatory work is in hand for the extraction of pillars. Owing to the friable character of the roof overlying the coal-seam considerable cost in timbering is likely to be incurred, and great care will have to be exercised in the working-places.

Munsie's section: Solid working is about to be suspended in this section, as the trend is to the dip. Hence the remaining portion of the solid ground will be forewon at some subsequent period from future developments of Cascade east. Meanwhile the area now opened will be pillared, towards which preparatory work is well advanced.

Ironbridge Mine: The Dundee dip section of solid working is decidedly the most important district of this property. In the earlier stages of operations, faulting of a reverse character was a source of considerable trouble, but during the current year several extensive rock cross-cuttings for the purpose of winning and ventilation have been completed, and the earning-capacities of the mine considerably enhanced thereby. So much is this the case that the face now opened maintains a maximum standard in quality and thickness of seam. Free drainage and mechanical ventilation are amply provided.

Big Pillar district: The extraction of these pillars continues to give satisfactory results—*i.e.*, if the extra thickness of coal-seam operated upon and the immunity of serious accidents are factors worthy of note, whilst the low percentage of waste may be chiefly attributed to the superior structure of the coal-seam and the favourable character of the immediately overlying strata.

Kiwi district: Recent developments extending further northward have exposed a coal-seam of average quality, while the outcrop pillars in the adjoining section are being successfully extracted. Respecting the working there is little change to report.

New works: With a view to the improvement of present ventilation, and to provide an ample supply of air to meet extended requirements, preparatory work is in progress towards the erection of a 12 ft. diameter double inlet fan of the "Hayes'" type with a guaranteed capacity of 150,000 cubic feet per minute at a 3 in. water-gauge. The driving-power will be effected by a new steam-engine made in the colony, and when operative the fan will control the ventilation in the various districts of the Cascade and Munsie's areas, and lay aside two lesser fans now in use. The surface section of haulage-road recently constructed between the wooden bridge and the brake-head terminal (with a completed length of 120 chains) was opened for haulage traffic in June last with satisfactory results, while the junction of the two subsidiary haulages, which control the output from the separate mines, deliver the coal at the wooden bridge, and from thence it is conveyed over the new route to the brake-head terminal. It is officially stated that in accordance with the results attained, the new haulage is capable of dealing with an output of 1,500 tons per day of eight hours. The coal-storage bins, with a calculated capacity of 2,000 tons, now under construction at the brake-head, will, when completed, be equipped with wagon-loading conveyers, sorting and picking belts, capable of treating and discharging the output into the bins. When these bins are completed they promise to be the most complete and substantial structure of the kind that has yet been erected at any West Coast colliery.

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Shots fired during the year: Mr. Dixon kindly furnishes the following: According to the official record kept at the collieries there were 38,166 shots fired, which, when calculated on the gross tonnage raised, gives an average yield per shot of 6·73 tons, while the ratio of mis-shots was 1 in 406. These records may be considered highly satisfactory, proving conclusively the quality of the explosive used and the judgment exercised by the operators.

Prosecutions: There were two prosecutions at Denniston J.P. Court for breaches of "The Coal-mines Act, 1891." (1.) Breach of special rule 36 by a miner holing without sprags; fine £1 with 9s. costs. (2.) A horse-driver travelling on rope-road whilst set in motion; fined 5s. and costs.

Throughout the whole system the working-conditions have been strictly observed in accordance with the requirements of the Coal-mines Act.

16 8 1904: Temperature in the sun, 57 degrees. The lowest reading in mine was 40 degrees and the highest 57 degrees, which latter was in a stone drive immediately after blasting. Average temperature of mine, 50 degrees.

Coal Creek Coal-mine, Buller Road (George Walker, lessee).—(8 10 1904): In the early part of the year the lessee had some little difficulty to find colliers capable of supplying the dredging demands, but this trouble was eventually righted by the services of a practical collier who soon put the face in working-order and provided coal in ample quantity. Unfortunately dredging on the Buller River has been somewhat on the down-grade of late, therefore steaming-coal is not in active demand. The mine is in good order, but the stone bands in the face are more strongly defined and overhead water is a source of discomfort in working.

White Cliffs Coal-mine, Buller Road (Job Lines, lessee).—(8 10 1904): Steaming-coal for the Old Diggings dredge is the chief supply from this mine, which gives employment to one man, who keeps the roof securely timbered. It may be stated that the Old Diggings dredge (owned by a private party) is the original Cocksparrow from Dunedin, it being famous in history, and now the most consistent gold-winner on the Buller. The pontoons, built of steel plate, give it the reputation of safety and buoyancy during floods.

Flaxbush Coal-mine, Three Channel Flat (De Phillippi, owner).—(14 10 1904): The Mokoia and Feddersen dredges get their supplies from this mine, and although the coal is small when mined, its heating properties for steaming purposes are preferred to that from Buller Road. When visited, the face (newly opened on longwall principle) was won by a rock crosscut driven off the main tunnel, whilst the section of the seam was the best for quality and thickness that I have yet seen worked on the property. Timbering is a special feature in the working, and ventilation is kept on the face from an opening at the outcrop. Three men employed.

Langford.—This mine is now a thing of the past.

Bourke's Creek Coal-mine (owners, Cairns and McLiver).—(6 12 1904): In the old mine, the coal in the face of the low level eastward having become very stony and wet overhead, the party decided to suspend further operations in that direction, and open a new section on the western terrace rising from the creek-bed. This work entailed the driving of a 6 ft. by 5 ft. tunnel through a mixture of old alluvial and crushed country, which necessitated careful timbering for a distance of 100 ft. The coal-seam won is of fair quality; but, the trade depending wholly on household requirements, the mine is shut down during the summer months.

Archer's Freehold, Capleston (F. W. Archer, owner).—(7 12 1904): The supply is maintained by the extraction of pillars on the rise level towards the outcrop. The small coal is chiefly used for steaming purposes at the dredges on the Boatman's Creek, while the round coal is carted and sold at Reefton and other centres as a first-class household fuel. A low level was opened with a view to effecting drainage to a greater depth, but after driving and rising were extended it was discovered the working was in an upper seam and not in line with the rise work, the change of level having been effected by an upthrow fault not formerly known in the field.

Coglan's Freehold, Capleston (J. Coglan, owner).—(6 12 1904): The demand is mainly for dredging purposes, one man being employed in the rise mine. Recently the owner opened a low level to intersect the coal-seam at the base of the terrace, but failed in his efforts to find coal.

Murray Creek Coal-mine (J. Billett, owner).—(8 12 1904): The supply of steam coal to the Consolidated Goldfields Murray Creek battery is still continued from this open-face property. At the time Mr. Billett acquired working-rights, speculation prevailed relative to the quantity and quality of the coal still existing in the leasehold, but his aptitude to develop a roadway to the face, suitable for horse and cart traffic, speedily changed conditions to a venture which has been a practical success in winning a valuable steaming-coal in large quantity.

Phœnix Coal-mine, Reefton (John Knight, owner).—(7 12 1904): During the heavy rainfall in March, 1904, the steep sideling overlying the coal-seam gave way in the form of a huge landslip, which crushed down the main level and destroyed a section of the road leading to the Inglewood quartz-mine. For a time this damage seriously affected the mine-owner, who lost no time to procure coal for the Inglewood battery from an old drive situated above the damaged road. To reopen the lost level was the next consideration, but the owner, having no practical means of ascertaining the extent of the damage done, decided to abandon all effort to reopen the level. Attention was then directed to drain a section of open-face coal located in the bed of the creek which is included in the leasehold. This drainage having been successfully carried out, provision was effected whereby the owner was enabled to supply his customers with household fuel of good quality, also to reopen the mine from the deeper level. With the object of ascertaining the true position of the mine-working, the party proposed to enter by the rise level, but so far they have failed in the attempt, the hill having not sufficiently settled. (19 10 1904): On visiting this mine on said date, a smouldering fire was discovered in a large heap of slack-coal, which was speedily shovelled into the creek, and the heated ground thoroughly cooled down by a water-supply from the creek. The fire originated under the fireplace of a hut built on the coal.

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Lockington's Leasehold, Bourke's Creek, Reefton.—(6/12/1904): With the object of providing ventilation and a second outlet, the west level driven from the terminus of the adit has been holed on the outcrop, while coal for household and steaming purposes is mined from the east side. The stone is frequently bad in the face, and tends to break the coal very much.

Blackadder's Leasehold, Reefton Town Belt.—(9/12/1904): Operations continue to be extended on the low level. The quality and thickness of seam is well maintained, and timber is freely used to secure the roof. Ventilation has been assisted by a rise connecting with the upper level. Brown pyritical stone occurs in the coal to some extent.

Lankey's Creek Coal-mine, Reefton.—(9/12/1904): The owner finds employment single-handed. The working is about 5 ft. in height, and the trend of the seam has been somewhat erratic of late.

The New Inkerman Mines (Limited) work this coal exclusively for battery and quartz-mining requirements on the property. The seam is practically on the same underlay as the quartz-veins, and the system of timbering is much on the same lines. Ventilation is well maintained from the open outcrops. One man employed.

Devil's Creek Coal-mine, Reefton.—The adit was recently reopened and very securely timbered, but nothing further has been done in the face.

Progress New Coal-mine, Reefton.—(7/12/1904): This mine is exclusively worked for the supply of steaming-coal for A and B Progress quartz-mines, the coal being chiefly mined from the extension of the west level, and rising to the outcrop. The thickness of seam is about 4 ft., and the quality fair for steaming. Two miners were injured by a fall of stone in the face.

Loughnan's Coal-mine, Reefton.—(7/12/1904): This mine is scarcely worthy of the name, for, when visited, a man is scarcely to be found. A coal-tunnel has been driven through the hill, and it seems to stand there.

Waitahu Coal-mine, Reefton (J. Scarlett, owner).—(7/12/1904): The low level has been driven for a considerable distance, but the soft nature of the coal does not seem to improve. Otherwise the coal is clean and free of stone. One man employed.

Burning Coal-seam at Boatman's.—The extinguishing of the smouldering fire at this burning coal-seam on the north bank of the Waitahu River appears to have been a success. During the recent exceptional long spell of dry weather indications of heat or smoke have been completely nil.

Blackball Colliery (owners, Blackball Coal Company; James Leitch, mining-manager).—(29/11/1904): The demand for the coal from this colliery being somewhat less than during the previous year or two, it was deemed advisable in the best interests of all concerned to reduce hands and keep the mine more fully employed on single shift. The gross tonnage raised (85,528 tons), as compared with the previous year, shows a decrease of 3,421 tons. The chief supply continues to be won from the extraction of pillars in the original rise district, but if the difficulties which are effected by friable roof and spontaneous ignition are to be considered undesirable factors in the economy of mining, then it is fair to assume that the percentage of coal won from this limited area is considerably in excess of the quantity originally computed. With reference to the cost and anxiety incurred (incident to the troubles arising from spontaneous ignition), the ratio of fires in the mine, compared with previous years, has been the reverse of favourable. The cause may be chiefly attributed to the largely increased area of exhausted workings, this view being fully borne out by the more deadly character of fumes given off from the exhausted ground, as compared with the fires fought with in the open bords. Whenever fires have broken out immediate steps have been taken to suppress them. As reported in former papers, the stoppings exclusively used are built with stone or crib-logging and properly packed with loose clayey matter to a width of from 5 yards to 6 yards in heaving ground, yet it is not uncommon for outbreaks to occur over these stoppings, even though the utmost care has been taken to avoid the possibility of such fires. Since the original water-supply (used for the suppression of fires) cannot possibly be maintained through the exhausted ground, fresh air-currents are supplied wherever practicable, but in such cases care is necessary to prevent ignition of the smouldering mass, and, using the manager's words, "desperate cases require desperate measures." Probably the most destructive and least expected outbreak that has yet occurred originated in the open terrace directly in the vicinity of the ventilating-furnace, the origin or cause being somewhat shrouded in mystery, as the outer brick-work enclosing the furnace was considered in every way sufficient to protect the coal against the possibility of ignition. However, notwithstanding all the difficulties attached to the suppression of the outbreak, the locality is now securely sealed down under a deep cover of dry sand, and all indications of smoke and heating are entirely cut off. Pending the completion of the Capell fan, ventilation was maintained by the small furnace. At time of writing the fan is reported to have commenced work, and to circulate an air-volume of 42,000 cubic feet per minute at a comparatively slow speed.

No. 2 Dip Tunnel section: In running the haulage and drainage levels westward in line for a distance of 25 chains from the bottom of the dip crosscut the level course suddenly dipped, and having failed to discover any favourable change in the trend of the measures after a series of consistent drivings, the course of the main level was changed 40 degrees riseward to effect level course, which angle will seriously cut off the working-faces. Development is well advanced in the opened ground, and should any unforseen accident occur, necessitating the abandonment of the rise-working, provision is made for the employment of seventeen pairs of colliers in the new dip district. Driving eastward, the coal does not look so promising, owing to its being soft.

Drainage adit: This adit, driven from the bed of Ford's Creek for the purpose of draining the workings of the No. 2 tunnel district, was 818 ft. in length at the close of the year, leaving 485 ft. to effect a holing.

The general equipment and working-conditions of the mine are good, and notwithstanding the very friable nature of the roof to be contended against in the removal of pillars, and the exposure to

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deadly fumes arising from spontaneous ignition, the absolute freedom from serious accident is a matter worthy of commendation. The provisions under the Coal-mines Act are strictly observed. Seven inspections were made.

Tyneside Proprietary Company.—(R. Alison, mining-manager).—(24/11/1904): This colliery, situated directly behind the railway-station at Brunner, is opened by a circular winding-shaft 97 ft. in depth, with a finished diameter of 10 ft., and operated on by two single-decked cages, whilst the adit on the south bank of the River Grey provides a suitable travelling-way for the workmen and an efficient intake for ventilation. During the year mining operations have been somewhat changeable from single to double shift to meet the requirements of trade, but on the whole work has maintained a fair average, the output showing a gross tonnage of 38,406 tons. Development has been chiefly confined to the extension of the dip haulage-road, which has been driven on an average gradient of 1 in 4 to a distance of 20 chains in a direct line from the shaft, the coal-seam won having maintained a fair quality during the whole distance driven. In connection with the driving of the dip, it was anticipated that the well-known Kimberley fault would intersect the coal-seam at about 15 to 16 chains from the shaft. It appears, however, that the produced line of fault, on crossing the dip heading, was simply traceable in the roof. On this assumption the management is confident that this extensive fault has pinched out and does not extend into the back areas as was originally considered. Meanwhile, further driving is suspended pending development from the Wallsend shaft. In view of proving the quality of the coal eastward, development has been more actively pushed, and, so far as the face has advanced, prospects are more favourable. Ventilation has received important attention, each district of working being ventilated with separate air-currents, the haulage-road acting as the main return. In addition to the influence effected on the return current by the heated column of steam-pipes, it is now further supplemented by the installation of a fan of the "Hayes" type, 6 ft. 6 in. in diameter, which is being driven to meet the present requirements of 25,000 cubic feet per minute, but has a capacity for a much larger volume. Since this mine was reopened, pumping has been a sore point in the economy of working, but happily this defect is now more systematically arranged by a much-needed system of water lodgements, the present system having placed the former anxieties within the range of comfort to all concerned. Respecting the west working there is little change of importance to note other than the routine of ordinary operations. Gas was reported in two of the heading-faces. Reports are kept to date. Six inspections made. A slight burning accident was reported.

Brunner Mines (R. Alison, mining-manager)—(24/11/1904): The quantity of coal won from the pillars extracted in working homeward from No. 1 fault towards the mine-mouth not only proves the consistency in which operations have been effected, but reflects credit alike on the part of the workmen and officers employed in the care exercised to prolong the life of the mine, also their little homesteads. To say the least, the greater part of the pillar-area extracted was so extensively worked in former years that further expenditure to reopen and work the ground was considered hopelessly worthless, and would incur an unnecessary waste of labour and capital. However, the labour and money expended have not only reaped a fair reward to all interested, but their efforts have provided a means whereby they have participated in an honest and contented living, notwithstanding the difficult and broken character of the ground dealt with in many instances, while immunity from serious accident has been a marked feature in the operations. Fireclay being a product of considerable value in the economy of this mine, special care has been equally taken to exhaust its resources thoroughly, for, like the coal, only patches remained for the last comer. Speaking on the general conditions afforded, it may be fairly assumed that the name of the Brunner Mine may yet be mentioned as a going concern in the Mines Annual Report of next year, providing precautionary steps are taken to work the remaining portion of the coal gradually, and allow the heavy overburden to settle down without throwing any undue subsidence on the elevated terrace land overlooking the Grey River, as it is important in the interests of the residents to take all the coal procurable without running any undue risk. The examinations of Brunner and Tyneside Mines are strictly made monthly by the workmen, and the reports recorded at the colliery office are highly satisfactory. Boring operations, now actively pushed on on the St. Kilda Flat, have attained a depth of 200 ft. Marls associated with quartzose bands have so far been found in the borehole. The ventilating-fan having been knocked out of working-order by the effects of the mine-working, ventilation is assisted by a steam-jet. Reports and other provisions of "The Coal-mines Act, 1891," are strictly observed. Seven inspections made. James Hunter, miner, sustained fracture of right leg.

Point Elizabeth Colliery (New Zealand State Coal-mines; James Bishop, manager).—(23/11/1904): In continuation of my report of last year, the various operative works and economic developments in connection with the handling of the mine-output have been practically completed in a substantial manner, and since export trade was opened with the colliery in June of 1904, 60,255 tons has been forwarded for railway, commercial, and household purposes. The active centres of mining operations have been confined to the coal-seam won on Nos. 1 and 2 rock-driven tunnels. At the two points stated, the seam where firstly intersected varied in thickness from 12 ft. to 16 ft., but as the winning-levels and rise headings were extended on the level course and to the rise of the field a decrease in thickness of the seam soon became an alarming factor in the economy of operations; so much so that the workable thickness in many places does not exceed 3 ft. Therefore, to cope with this extensive and disappointing thinning, immediate measures are required to prevent serious reduction in the output, and it is pleasing to note that the management, being fully alive to the position, have lost no time to test the field dipward in driving a dip heading off the main level in No. 2 section. The dip, now driven a distance of 20 chains, has proved an unbroken section of coal-seam of superior quality and thickness, which positively indicates that the major part of the field extends to the dip of the present working. Machinery of a temporary character is used to meet prospecting requirements, but, providing future developments

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of the seam meet anticipations, the installation of more powerful and permanent plant will be necessary. The absence of water is a notable feature in the working-conditions. The endless-rope-haulage system, the best that could have been adopted, is in operation. The construction of storage-bins with a loading-capacity of 2,000 tons has been substantially completed, but in addition to the present appliances in use, conveyer-belts will be furnished for the more even distribution and efficient cleaning of the coal before loading. Amongst the essentialities at the colliery are the blacksmiths' and carpenters' workshops, which are spaciously built and equipped with useful labour-saving tools; also the office recently erected for colliery use compares favourably with similar buildings at more important centres. The sawmilling plant has been found a factor of considerable value in connection with the development of the property, and with the recent addition of the planing-machine, the requirements for building timber for workmen's dwellings will be much simplified. The general equipment of the colliery has been carried out on substantial and efficient lines. The ventilation and general working-conditions of the mines are satisfactory, and the provisions under the Coal-mines Act are strictly observed. Seven inspections were made. Thomas Smith, miner, was killed by a fall of roof.

Accidents and Fatalities.

Brunner Mine.—(18/1/1904): Wright Armstrong, roadman, killed by a fall of coal whilst drawing timber.

Coalbrookdale Mine.—(1/3/1904): Albert Jefferman, miner, killed by fall of coal in the face, spragging neglected.

Point Elizabeth Mine.—(14/12/1904): Thomas Smith, miner, killed by a fall of roof on flatsheet.

Mokihinui Mine.—(10/3/1904): John Tressman, miner, had legs bruised by fall of coal in the face.

Coalbrookdale Mine.—(3/5/1904): J. Price, shiftman, sustained injury to head and face and arms while setting timber—not serious.

Ironbridge Mine.—(28/7/1904): F. Hudson, miner, had collarbone and two short ribs broken by fall of bottom coal breaking away from underneath the sprag while he was holing.

Point Elizabeth Colliery, Greymouth.—(26/1/1904): Walter Watson, carpenter, had arm broken while erecting coal-bins. (27/9/1904): William Davis, deputy, had two ribs broken and injury to shoulder while drawing timber in the east level face off No. 1 tunnel.

Tyneside Mine.—(28/9/1904): W. Moses, miner, was slightly burned by explosion of gas in the face.

Puponga Mine.—(8/4/1904): Thomas Collier, miner, sustained cuts on face and scalp-wound by fall of coal in the face.

Progress New Coal-mine, Reefton.—(4/8/1904): Thomas McGee and William Cochrane (mates) were injured by fall of stone in face.

Brunner Mine.—(14/10/1904): James Hunter, miner, sustained fracture of leg by fall of stone in face.

General Remarks.

The output of coal during the year ending 31st December, 1904, was 836,950 tons, which is an increase of 55,918 tons as compared with the previous year.

The year 1904 has been marked by the active progress made in the erection of mechanical appliances to effect increased efficiency in the ventilation of the West Coast collieries. At Blackball and Tyneside Mines fans have been erected and are now in operation, whilst, as already reported, the Westport Coal Company have carried out extensive works preparatory to the erection of a 12 ft. diameter double-inlet fan, with a guaranteed exhausting-capacity of 150,000 cubic feet per minute, at a 3 in. water-gauge. At time of writing, this fan has arrived at Westport. The Puponga Coal Company have also completed arrangements to install a single-inlet fan, 7 ft. in diameter. These fans when erected and operative will place the whole ventilating system of the principal West Coast collieries under fan-control.

Drainage.—The rock-driven adits now well advanced towards completion at Millerton and Blackball will effect free drainage over the whole system now operative at each colliery.

Foreign Trade.

Westport Coal Company.—The total tonnage shipped directly from the port of Westport to outside the colony during the year 1904 was 44,319 tons, this statement being a decrease of 9,497 tons as compared with the previous year.

I have, &c.,
R. Tennent,
Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

No. 4.

Mr. E. R. Green, Inspector of Mines, Dunedin, to the Under-Secretary, Mines Department, Wellington.

Sir,— Office of Inspector of Mines (Southern District), Dunedin, 1st April, 1905.

I have the honour to submit the following report on the coal-mines in the Southern District for the year ending the 31st December, 1904, in accordance with the requirements of section 67 of "The Coal-mines Act, 1891":—

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CANTERBURY.

Springfield Colliery, Springfield (J. Taylor, permit).—(19/8/04): The mine is in good working-order. Timber is well used throughout the mine. Ventilation fair. The return airway to the shaft required attention, but a new heading is being driven in coal to connect with the shaft. Six men are employed. 413 tons 10 cwt. of fireclay raised from this pit during the year.

Victoria Mine, Springfield (W. J. Cloudesley).—(19/8/1904): A new mine driven outside the boundary of the company's fence found the coal-seam disturbed and troubled by an upthrow fault to such an extent that work has been discontinued until the return of the proprietor, who is on a visit to England.

Homebush Colliery, Glentunnel (J. C. Campbell, manager).—(20/8/1904): New cross-measures drive east from main level at 136 yards struck 6 ft. seam of coal in which levels are being turned away north and south. Dip section: Dip extension suspended meanwhile, north and south low levels being driven narrow (6 ft.), and false roof being taken down to provide permanent air and travelling ways. Drum heading section: Work to rise still confined to splitting and extracting pillars. Henry Nicol sustained bruises to loins on the 6th August; a flake of false roof had fallen and borne Nicol to the floor. The mine-manager had instructed Nicol to take the flake down. Nicol and his mate had, however, decided to first fill a box of coal. 209 tons of fireclay had been taken from this mine during the year.

St. Helen's Colliery, Whitecliffs (H. Levick, permit).—(20/8/1904): Mine-workings in good order, and ventilation fair. The levels are driven to the faults, and the pillars are being brought back. Timber is well used. Development of the mine has been considerably hampered by faults struck in the north and south sections. The main cross-measures drive has been extended to search for a new seam, but without success.

Mount Somers Coal Company, Mount Somers (M. Neilson, mine-manager).—(11/11/1904): A new mine-entrance has been made to rise of old workings, and south levels are driven practically on the western boundary, leaving the bulk of the seam unworked to the dip. When the proposed tramway is laid up the Woolshed Creek Valley there will be little difficulty in driving a water-free level to the dip of the seam, which will command a large block of coal to the rise. Thickness of seam, 24 ft. Work during the year has been seriously hampered by twelve successive falls of snow, a serious consideration, seeing that there are eleven miles of tramway above ground from the mine-mouth to the Mount Somers Railway-station.

Woolshed Creek Colliery, Mount Somers (J. Healey, permit; W. T. Doak, secretary).—(11/11/1904): Coal to rise becoming rapidly exhausted. Pillars are robbed almost to their last extremity. A new drive at a lower level will soon be a necessity, or, as an alternative, a drive to the dip, when hauling and pumping plant will be required. In further working it would not be advisable to work above the main stone band in the centre of the seam, there being a full 12 ft. of good coal below the band, and, if substantial pillars be left, a large percentage of coal might be won. Several props were required in the level roadway for better security.

Albury Coal-mine, Albury (J. M. Willetts).—(24/8/1904): Air-shaft at front of workings, and good air now circulating though the mine. Coal is won by means of crosscuts instead of headings and bords. The tongues of pillars at breakaways are left too small for permanent roof-support, and I instructed Mr. Willetts to that effect. The mine is situate upon Opawa Station, now known as Chamberlain Settlement.

Waihao Coal-mine, Waihao Forks (A. A. Adamson).—(26/8/1904): This mine had been worked in sections, each section being pillared as a new one was opened out. In the early part of the year the mine was found to be on fire, and was at once closed off. The mine was still closed on the date of my visit. Adamson has since surrendered his lease to Mr. Grant, the landowner.

Waihao Forks Coal-mine, Waihao Forks (D. McPherson, owner; George Lomas, permit).—(26/8/1904): This property had hitherto been worked in a small way, opencast. A dip drive has been driven 120 ft., and levels broken off. Three men have been employed. The owner has now granted a lease over 80 acres to a Christchurch syndicate for twenty-five years on a royalty basis. The property is to be worked on a more extensive scale, for which purpose a steam winding and pumping plant is to be erected.

Elephant Hill, Waihao Downs (Lewis Mathias, runholder).—(26/8/1904): This mine was worked in the early part of the year by A. A. Adamson, who subsequently surrendered his lease to the landowner, Mr. L. Mathias. The mine has recently been retimbered in accordance with instructions received from this office, and is now in safe working-order. Coal is obtained for station requirements. One man employed.

NORTH OTAGO.

St. Andrew's Colliery, Papakaio (Thomas Nimmo).—(22/10/1904): Still coming homeward on the pillars; ash stoppings regularly inserted to imprison black damp in waste ground, thus minimising risk of spontaneous fire. Rules posted; plan to date.

Prince Alfred Colliery, Papakaio (G. N. Willetts, permit).—(22/10/1904): New shaft sunk in front of advancing workings, giving good ventilation. Underground workings are now bordering on the Coal Reserve, and the plan requires to be brought up to date.

Ngapara Colliery, Ngapara (William Nimmo).—(20/10/1904): Coal-seam 25 ft. in thickness, of which 6 ft. to 8 ft. in the centre of the seam is being worked. A dry crevice or cavity, 15 ft. by 12 ft., met with in the level was found full of black damp. A new shaft is being sunk to the rise to increase the efficiency of this well-ventilated mine. All dross is drawn. Roadways and working-places in good order.

Allandale Colliery, Shag Point (C. H. Westfield, mine-manager).—(23/12/1904): Roadways, working-places, and return airways continue to be maintained in good order and condition. Timber

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being systematically used, and, notwithstanding the band of stone in the roof, accidents from falls of roof are comparatively rare. The dip section is opening out in a satisfactory manner. The seam of coal more than maintains an average thickness of 6 ft., the coal being of good quality. Electric haulage and pumping plant are being installed for use in the dip workings and haulage on main level underground, the power being generated at the surface steam-boilers, and transmitted to winches underground by cables suspended from insulators inserted in posts on roadside. On this date the ventilation was rather dull in dip working-faces owing to the back airway being behind, otherwise ventilating current fresh and good throughout the mine. Districts being worked are the North Level section, Stone Jig section, and Dip section, all in No. 1 seam, and Long Jig section, No. 2 seam. Thomas Foster, junior, trucker, seventeen years of age, working with his father on the 10th October, 1904, slipped and fell, striking his knee against a rail on the roadway. The accident was looked upon as being of a trifling nature at first, but some days later symptoms of inflammation were detected. The lad was brought to Dunedin Hospital, and the knee operated upon without avail, as Foster gradually sank and died from blood-poisoning on the 1st November, 1904. Three visits of inspection have been made during the year.

Shag Point Colliery, Shag Point (E. W. Brooke, permit).—(12/8/1904): Shaft workings abandoned, and water in shaft has risen to sea-level. Workings on sea-beach continue to afford a small output for local requirements. A start will soon be made to open up a thin seam known to outcrop on the hillside. (23/12/1904): Coal-mining operations are confined to the 2 ft. 8 in. seam; but, 12 ft. below, a seam 4 ft. 6 in. in thickness, broken by a 3 in. band of stone, is being prospected. An air-shaft has been provided. Six men are employed.

South Otago.

Fernhill Coal Company, Abbotsford (James Gray, manager).—(26/7/1904): Mine in good order, and ventilation good. Prospecting drives continue to be driven in an endeavour to get behind the area lost by fire and water.

Freeman's Coal Company, Abbotsford (R. Hill, mine-manager).—(26/7/1904): Mine in very fair working-order. Ventilation good, and air well conducted around the working-faces. Preparations are being made to re-erect the hauling plant at Fernhill, the object being to utilise the Fernhill branch line of railway, and dispense with the tram-line hitherto used for conveyance of coal-output to the railway siding on main south line of railway.

Jubilee Colliery, Saddle Hill (Peter Campbell, mine-manager).—(27/7/1904): Work now being carried on in southern section of the mine. Ventilation adequate. Coal roof and sides strong and self-supporting, and, being water free, the conditions of mining at this colliery are very favourable.

Saddle Hill No. 1 Colliery, Saddle Hill (Christie Bros., owners; W. W. Ogilvie, manager).—(27/7/1904): New upcast air-shaft to the rise affords better ventilation of the workings than had previously been the case. The levels, headings, and bords are carefully laid off and driven to lines, ensuring regularity of the workings and sizes of pillars.

Saddle Hill No. 2 Colliery, Saddle Hill (W. H. L. Christie, manager).—(27/7/1904): Air somewhat dull at working-faces. Will be improved by the brick furnace which is being built in at bottom of upcast air-shaft. Working-places safe, coal strong, little or no timber being required.

Burnweil Colliery, Saddle Hill (Adam Harris).—(28/7/1904): A decided settlement is taking place, extending over the area of worked ground, floor rising and pillars sinking quietly, resulting in very little damage to the pillar and head coal by way of crush. The water is being allowed to rise in the dip workings.

Glenochiel Colliery, Saddle Hill (D. Bryce, permit).—A new mine driven from surface, but, unfortunately, the fringe of solid coal between outcrop and worked ground is less than had been expected.

Lauriston Colliery, Brighton Road (J. R. Walker, owner).—(3/7/1904): Mine in safe working-order. Ventilation good. Three men employed.

McColl's Coal-pit, Brighton (D. L. McColl, owner).—(22/2/1904): Drawing pillars in old mine. (3/7/1904): New low-level tunnel being driven. Should strike coal-seam at 100 ft.

Walker's and McColl's coal-pits are situated on the property now known as "Duncan Settlement."

Drummuir Coal-pit, Brighton (James Sneddon).—(3/7/1904): A small amount of coal mined for private use only.

Bruce Coal-mine, Milton (A. Young, owner).—(23/6/1904): No one about on this date. The fire is evidently overcome, and there was no smoke visible. (3/11/1904): The mine-mouth and the opencast coal-face now completely smothered with gravel from overlying measures. There were no signs of smoke. One man getting coal from another section of the property.

Strip-and-at-it Coal-pit, Milton (N. Hardwick).—Mine closed. Hardwick deceased.

Fortification Railway and Coal Company, Akatore, Milton (John Brown, permit).—(23/6/1904): Workings confined to splitting and robbing pillars between new and old dips. The mine-workings open are clean and in very good order. Ventilation satisfactory. (3/11/1904): This property has now passed into the hands of the mortgagee, Mr. John Begg, farmer, Hillend, Otago. Six men are employed in and about the colliery. The work is confined to the extraction of pillars. Timber is provided and well used. Ventilation good.

Bruce Colliery, Akatore, Milton (Messrs. Begg Bros., Hillend, proprietors; James Macallister, manager).—(3/11/1904): Gate on mine-mouth locked. No one about on this date.

Glenledi Coal-pit, Milton (N. McGilp, owner).—(3/11/1904): Pit being worked opencast. No one about on this date.

Adam's Flat Coal-mine, Adam's Flat (J. Reid, owner).—Opencast pit with limited output to supply a local trade.

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Paskell's Mine, Adam's Flat (J. Paskell, owner).—Nothing doing in this pit.

Lovell's Flat Colliery, Lovell's Flat (J. Carruthers, mine-manager; R. Glendinning, owner).—(8/5/1904): The general work in the mine is the extraction of pillars from the upper four bords of the dip and the barrier between Gibson's old workings and the new workings. There are only two places in solid coal in the two lowest bords, and these have not far to go. Timber is well and plentifully used. Ventilation fair throughout the dip workings. The back airway was closed temporarily on account of a small fire in a narrow heading, and a new return is to be pushed on. In the meantime air-return is effected by one compartment of the main haulage-shaft. (22/6/1904): Pit idle to-day, but shiftmen engaged driving new return airway through pillar at near bottom of second outlet and upcast air-shaft. The new airway is necessitated by fire and falls in the old return. The whole of this district being warm fire-stoppings are in bord ends to the headings. The manager had conferred with the men *re* sanitary arrangements underground, and a certain course had been agreed upon. Two men, however, had resented being spoken to a second time as to their dirty habits. The bevel-geared wheels of elevator in screening-shed require fencing. Judging by indications underground, the coal-basin may not be expected to exceed 16 acres, thickness of seam being from 14 ft., tapering to 4 ft., at which latter unpayably workable, blackstone in roof displacing coal. Depth of seam, 470 ft. from surface. (2/11/1904): Work in the mine now confined to the extraction of pillars. Timber is well used, and there is also an ample supply provided. The ventilation is fair throughout the mine. On the 13th October a defect in the surface boiler necessitated a stoppage of the pump. The water rose and caused a partial collapse of the dip, which has since been retimbered. The south heading has been reconnected with the upcast shaft, thus restoring air-circulation. The property has been thoroughly prospected by boring, unfortunately without satisfactory results.

Tuakitoto Colliery, Lovell's Flat (A. Dunlop, owner).—A large surface slip having filled the mine-mouth this mine has been closed during the year.

Benhar Coal-mine, Stirling (James McLeod, permit).—(13/3/1904): The mine is in good order, and ventilation good. Some timber requires to be renewed in the main dip. Six men are employed. (2/11/1904): Mine in good order. Ventilation good. Timber renewed in main dip. 2,100 tons of fireclay taken from this mine during the year.

Mount Wallace Coal-mine, Stirling (James Walls, lessee, permit).—(13/3/1904): The trade from this pit is limited. There is no pumping plant, and the dip-face was flooded on this date. Coal was being taken from some of the larger pillars. Two men at work.

Taratu Colliery, Kaitangata (J. H. Young, mine-manager).—(31/1/1904): New mine-entrance and new second outlet and return airway at opposite Welsh's face. Work mainly consists of dropping 4 ft. of head coal in the bords already won, care being taken to trim any loose coal off the roof. The seam in one place where roof fallen is 20 ft. in thickness. The new prospecting-shaft is sunk to a depth of 143 ft., mainly through sandstone grits and quartz conglomerates. (28/10/1904): The headings to west are cutting out on a fault having a downthrow eastward; hade, 45 degrees, and line of fault north-west and south-east. The south main level has been driven through to Welsh's face. Several falls have occurred to the surface in places where pillars and roof coal had been robbed. Air good.

Kaitangata Colliery, Kaitangata (R. S. Jordan, mine-manager).—(14/12/1904): Development-work in the stone drive extension east practically suspended throughout the year. South going level, main seam, is in to No. 6 fault. The rise workings Nos. 1, 2, and 3; headings in new seam have been pillared and robbed to the fullest extent, consistent with safety. Dip sections being worked: Dips Nos. 8, 9, 10, 11, and 14 have been practically exhausted of coal to the level ribs in which ash fire stoppings had been placed, such being necessary in each instance. Dips presently working are Nos. 7, 12, and 15. No. 12 dip is driven 650 ft. to the fault. Bords northward driven narrow and now coming home with pillars. No. 15 dip southward of main-haulage road in Scott's level. Substantial brick stoppings have been erected in the front of the main seam coal pillars at the foot of the main in mine, effectually sealing off this portion of the old workings and confining several spontaneous fires which had given considerable trouble from time to time. A brick arch has also been built in the main roadway in the 18 ft. seam in-bye No. 3 dip, which it is hoped will have the effect of subduing the fires in coal pillars at that point. Ventilation is maintained at from 36,000 to 37,000 cubic feet per minute at the intake. The several splits of air (five in all, to as many districts) are regulated so that each district has its separate split of fresh air passing direct into main return airway to upcast shaft. The return airways had been carefully maintained, frequent attention being rendered necessary on account of not only roof-pressure but side-pressure, a proportion of which may be attributed to settlement of the strata in the pillared sections of work. The fullest attention has been paid to the appointment of an efficient staff of officers in the mine. Proper examinations duly made, and the results entered in the several report-books in accordance with the Act. Safety-lamps only are allowed in the mine in-bye the cabin, the lamp-station notice being posted at the cabin, which is situated at the foot of the main haulage-incline. The increased number of minor accidents at this mine during the year have been attributed to the exclusive use of safety-lamps in the mine, their illuminating-power being less than that of the ordinary open oil-lamps formerly in use in such parts of the mine as were considered safe. The colliery-manager, Mr. Jordan, is averse to the use of "mixed lights" in the mine. Plans to date, and rules posted. Small quantities of gas have been reported on several occasions in the solid-going places—Scott's level to No. 15 dip, and in the south levels, main-seam workings—but not in sufficient quantity to interfere with the work. A complaint had been made to the manager and to myself that the atmosphere in No. 14 dip on the 19th October contained an undue proportion of carbonic-oxide, which was injuriously affecting the miners working there. Investigation revealed an incipient fire in the pillared ground at the bottom of the dip from which the gases being distilled were adulterating the air. An ash fire-stopping was then put in the dip and the ventilation short-circuited, when the air

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became restored. An analysis of a sample of the vitiated air by Dr. Black, Otago University, resulted as follows: Carbonic-acid gas, 0·83 vol. in 100 vol. of air; carbonic oxide, about 0·06 vol. in 100 vol. of air; firedamp, about 1 vol. in 100 vol. of air. Ten visits of inspection had been paid during the year.

Castle Hill Colliery, Kaitangata (R. S. Jordan, mine-manager).—(21/7/1904): Air at intake, 28,000 cubic feet per minute. The lower levels in Nos. 3 and 4 winch dip workings are being pillared and robbed outward. Main seam and south level sections in good working-order. The new seam to the rise is troubled and not opening out quite so well as had been expected. A small quantity of gas was found at face of No. 2 heading. There was no one working in this place. Main level to furnace and back return airway in excellent order, having been recently repaired. The working-conditions of this mine are favourable, and the colliery is worked as an auxiliary to the Kaitangata Mine, the latter being kept going as steadily as possible throughout the year, while Castle Hill Mine is reserved for supply of surplus winter-trade requirements.

Mainholm Colliery, Conical Hills, Waipahi (Fred. Lischner, proprietor).—Opencast pit. This pit is well worked and produces over 3,000 tons of coal annually.

Central Otago.

Coal Creek Collieries, Coal Creek, Roxburgh (J. Barber, mine-manager).—(11/4/1904): Leasehold Mine.—No coal has been raised from the leasehold for some time, operations having been suspended until the overburden was stripped off. A fire broke out in the waste-heap in close proximity to the coal-measures. Risk of ignition of the coal-seam was removed by trenching. Freehold Mine.—As the coal trade is slack in the district, there were only two men employed in the Freehold section. The mine is in good order. Ventilation good. Rules posted, and report-books up to date. (21/4/1904): Freehold Mine.—Two men at work on the freehold. Leasehold Mine.—Still nothing being done on the leasehold. (7/7/1904): The company was notified under date the 5th July, 1904, to resume winning coal from the Leasehold section. Operations have been resumed on the Leasehold section of the property.

McPherson's Pit, Coal Creek, Roxburgh (Mrs. M. McPherson, lessee; A. McPherson, manager).—(11/4/1904): Work is proceeding satisfactorily in this opencast pit. There is a large area of bottom coal to take up. (15/9/1904): A pit is being sunk in the "resin" seam and preparations being made to raise a 20 ft. lift of "bottom" coal.

Craig's Perseverance Coal-mine, Coal Creek Flat (James Craig, lessee; John Craig, manager).—(11/4/1904): Mine-workings in good order. Ventilation good. Care must be exercised with regard to the upper abandoned workings on account of the risk of spontaneous ignition in this mine. (16/9/1904): Mine free of dross and in good order. Dip down 220 ft. in upper seam; angle of inclination 1 in 4. Seam of coal 50 ft. in thickness,r12 ft. of clay band, then lower seam, which had been sunk into 6 yards, but is not now being worked.

Progress Colliery (Gully Pit), Roxburgh (James Bailey, agent for licensee).—(10/11/1904): Very little has been done in this pit, pending arrangements being made to provide a suitable winding and pumping p'ant.

Perseverance Colliery, Alexandra (R. M. Finlay, lessee; A. Hunter, manager).—(23/1/1904): Working-places in safe condition, and ventilation fair. As had been expected and indicated in last year's report, firedamp has been detected in the dip drive working-face, and particularly at the faults which occur. Daily examination is made with locked safety-lamp as provided by the Act. Falls from roof in return airway require attention. (14/4/1904): Messrs. Hunter, Mathias Bros., and Bowler have secured from the lessee the right to work this mine, with a view to purchase. Although not included in the agreement the haulage and pumping plant is to be at the disposal of the party for some time. Unfortunately the prospects of this mine are not good. Going to the dip the seam is much flatter than near the rise, and there is a marked change in the quality of the coal, which is soft and unsaleable. This section of the mine is broken and faulty, but the extent has not been proved. (31/5/1904): The presence of firedamp was again detected in the dip-level workings on this date. The ventilation was fair. Seven men employed in the mine. (12/7/1904): No firedamp has been detected since the 8th June, 1904. Mine-workings in safe order. (1/10/1904): Operations suspended on this lease. The plant is to be removed and application made for cancellation of existing lease.

McQueenville Colliery, Alexandra (S. T. Lett, lessee; John Hodson, manager).—(23/1/1904): Mine-workings in good order. Lodgment being enlarged to hold twenty-four hours' water to obviate necessity for Sunday pumping. Ventilation good. (14/4/1904): Considerable difficulty is being experienced in coping with the growth of water in the lower mine-workings. The origin of this water is at present unknown, though partly due to natural drainage from the overlying strata, which is of a porous, open nature. The pumping-appliances not proving wholly effective increases the difficulty of keeping the mine unwatered. The manager complained of the unaccountable increase in the flow of water. The mine is in safe working-order, with good ventilation travelling round. The lower mine-workings are being worked narrow, 6 ft. in width by 6 ft. in height, with pillars 30 ft. square. (31/5/1904): The water has now risen to within 60 ft. from the mine-mouth, the pumps being unable to cope with the increased quantity Coal is being obtained from a small block of solid in the rise workings near the outcrop. (1/10/1904): Lett intends to apply for cancellation of existing lease, and make application for a new lease of 50 acres adjoining the Undaunted lease. Work in the McQueenville Mine is now confined to splitting a few rise pillars to keep the trade going. (15/11/1904): Revisited the mine on this date on account of a reported collapse of the lower dip workings. An examination of the mine revealed the fact that a disturbance had taken place over a considerable portion of the lower workings, resulting in the crushing of pillars and heavy falls from the roof. There was a heavy inrush of water into the mine from breaks in the roof of the seam, and also a settlement over a considerable area of surface. The steam-pump being recovered an attempt was made to cope with the water, without avail

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Alexandra Coal-mine, Alexandra (Hunter, Mathias Bros., and Bowler, lessees; Andrew Hunter, manager).—(14/4/1904): The lessees have secured this property from Mr. W. A. Thomson at a reasonable figure. The dip drive is now being cleared out preparatory to extending mining operations further into the dip section of the field of coal. Ventilation in the mine is fair. Safety-lamp inspection made as a precaution does not reveal any trace of firedamp in the mine. (31/5/1904): Pit idle at present; trade slack. (1/10/1904): Operations have now been resumed on this property. A new dip is to be driven, as it was found that the lower present dip workings are practically lost. Ventilation good.

Alexandra Coal Company, Alexandra (James Pollock, mine-manager).—(22/1/1904): Mine in good order. The ventilation has been considerably improved by the adoption of wooden air-stoppings in the mine to replace brattice cloth hitherto in use. (13/4/1904): Mine and appliances in good working-order and all safe. A total of ten men are employed in the mine on day-shift and four men on afternoon-shift. Ventilation good. Safety-lamp inspection duly made and results of examinations entered in report-book. Report-books kept up to date. General and special rules posted. Boreholes kept as prescribed in all advancing places. As instructed from this office a barrier of half a chain of solid coal is being left between the dip workings and the riverward area. In this latter area the places are all broken away narrow to admit of speedy closing off. An efficient barrier is being left on the river frontage. Although moist backs are met with, there is very little water given off from the advancing places in the rise workings. A soft band of coal has been struck in the main dip, which is giving off water freely. A "Snow" Duplex steam-pump has been installed in the dip as an adjunct to the main pump at bottom of shaft. (31/5/1904): Mine in good order; ventilation fair. The soft or faulted coal in the dip cut out into solid coal, and the water has pined off. Eighteen men are employed underground in three shifts. Average pumping-time, fifty-nine hours per week. Water-growth steady, averaging 96,000 gallons per twenty-four hours. (30/9/1904): Mine-workings in good order. In order to further improve the ventilation the wooden air-stoppings are to be continued down the main dip. This will carry the fresh air direct to the working-faces. Complaint having arisen as to the necessity for latrine accommodation, a suitable closet has been erected on the surface, and is used by the workmen, evacuation underground being prohibited.

Undaunted Coal-mine, Alexandra (D. H. Mathias, permit, lessee).—(14/4/1904): No coal has been taken from this lease for the last three months. The lessee intends to bring the plan up to date, draw the plant from the mine, and apply for cancellation of the present lease with a view towards amalgamation with two neighbouring leases. The present style of working this mine is costly and out of date, while the lessee considers trade-prospects in the district do not warrant the expenditure of capital in haulage and pumping plant. (31/5/1904): Pit still unwatered.

Cambrian's Coal-pit, Cambrian's (Catherine Dungey, lessee).—(18/3/1904): Very little coal is taken from this lease, which is now practically exhausted. One man at work.

Welshman's Gully Coal-pit, Cambrian's (J. McGuckin, lessee).—(18/3/1904): Trade has materially decreased at this pit during the past twelve months. Coal is brought into the district by wagoners (as back loading) from the Alexandra coal-pits, while competition in the coal trade is also strong in the district. The seam, which is worked opencast, is a difficult one to work owing to the dip of the seam and the heavy overburden. Two men generally at work. (14/7/1904): Lignite-seam, 15 ft. to 30 ft. in thickness. Dip of seam 1 in 3 westerly. Stripping, 15 ft. to 30 ft. in depth. An attempt has been made to win the coal by driving, but had proved the cost to be greater than the usual sale price when stripping was again resorted to.

Blackstone Hill Coal-pit, Blackstone Hill (James Armitage, lessee).—(20/3/1904): Opencast pit. Stripping light, but water inflow heavy. Two men at work.

Price's Coal-pit, Blackstone Hill (G. Price, lessee).—Coal taken out for private use only.

St. Bathan's Coal-pit, St. Bathan's (James Enwright, lessee; James Doyle, manager).—(20/3/1904): I drew the manager's attention to the necessity for keeping the overburden well stripped back from the working coal-face, and subsequently wrote the lessee to the same effect. Two men at work. (24/5/1904): Pit now in better order. Stripping being attended to.

Rough Ridge Coal-pit, Idaburn (Mrs. M. Beck, lessee; William Beck, manager).—(22/3/1904): I instructed the manager to proceed at once to strip the overburden ahead of the working coal-face, and subsequently wrote the lessee to the same effect. The coal-face is 25 ft. in height, and is overlaid by 8 ft. of gravel. Three men generally employed. (24/5/1904): Pit in very fair order, attention being now paid to stripping in advance of coal-working.

Mr Beck's Pit, Idaburn (Mrs. M. Beck, lessee).—(21/3/1904): Nothing doing on this date.

Idaburn Coal-pit, Idaburn (J. White, lessee).—(21/3/1904): Opencast pit. Stripping in advance and [illegible] down lignite-face. Two men employed. (24/5/1904): Pit in very fair order. Bottom of seam now rising and outcropping to the south-eastern boundary.

Border Coal-pit, Rough Ridge (George Turnbull, lessee).—(21/3/1904): The lessee experiences [illegible] in the working of this pit, which is subjected to flooding during rises in the Idaburn Creek. The pumping plant is quite inadequate. One man at work.

Cimmerburn Coal-pit, Cimmerburn (C. Dougherty, lessee).—Coal mined for private use only.

Commercial Colliery, Upper Kyeburn (Christian Archer, permit, lessee).—25/3/1904): Seam [illegible] mined by levels driven off the shaft to the boundary in solid coal. The head coal is then brought out and the roof allowed to fall behind. Three men employed. Owing to scarcity of demand for coal in this district, and competition from better coals brought in by railway, the lessee has decided to abandon the lease. Coal has been mined from this lease for the past twenty-four years. (25/5/1904): The [illegible] of the seam had become soft at depth, and recently a run of drift-sand had filled the workings about 150 ft. in one night. Abandoned.

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McCready and Coomb's Coal-pit, Kyeburn Diggings (W. Coombs, lessee).—(25/5/1904): A vertical seam which was 25 ft. in width at surface, drawing in to 12 ft. at lower levels. Coal had been worked out from each side of the spur to water-level, below which the coal is said to be soft and inferior; in fact, all the seam was much the same, and made a lot of waste. A few tons taken out per annum for private use only.

Stephen Beer's Coal-pit, Kyeburn.—(25/3/1904): This pit, which lies on the western bank of the Kyeburn River, was opened out, and a face of coal proved, but operations were suspended on account of floods. This pit was opened out in anticipation of a demand for coal to meet the requirements of dredges.

Donaldson's Coal-pit, Horse Flat, Macrae's (W. and G. Donaldson, lessees; H. N. Mills, permit).—(16/6/1904): This is a seam of inferior coal. The roof is tender and broken, and requires to be well timbered. Drainage-water troublesome. Three men are employed getting fuel to supply Donaldson's quartz battery at Golden Point.

Clyde Collieries Company, Clyde (G. F. Turner, mine-manager; L. G. Reeves, secretary, Dunedin).—(6/10/1904): Owing to the decline of the dredging industry in the district (Clyde–Alexandra Gorge) there has not been a large demand for coal from this mine. Through connection has been made from the Vincent section to the Dairy Creek section. This simplifies the question of pumping, and a suitable pump is to be installed. With increasing depths of workings the pillars are being left larger. Coal is now being won from four seams, a new seam having been tapped overlying all, making a total thickness of 85 ft. of coal in all. Eleven men employed in and about the mine. Report-books kept; rules posted. Ventilation good throughout the mine.

Holt's Pit, Shepherd's Flat, Clyde (W. J. Holt, licensee).—(6/10/1904): The dip proving expensive to work a new level drive was put in, but did not succeed in striking the coal to the dip. The mine is unwatered by a siphon. Several sets of timber were required in the main drive. The places are driven 5 ft. in width, and the pillars are left 20 ft. square. Two men are employed. On the expiry of Holt's license it was renewed in favour of the Loch Lomond Gold-dredging Company, whose dredge is supplied from this mine.

Doolan's Creek Coal Company, Gibbston.—The company is in liquidation, and the area abandoned.

Gibbston Coal Company, Gibbston (J. Duncan, mine-manager; G. R. Cheeseman, general manager). (30/11/1904): Owing to the decline of the dredging industry in this district, combined with competition from Bannockburn, Cardrona, and other coals brought in, the output of the mine is limited. The mine-workings were in fair order on this date. Ventilation fair. Owing to a settlement having taken place over a large area of ground to the rise standing on pillars some trouble has been experienced in coping with underground fires resulting from spontaneous ignition. The surface plant and tramway are in good order. Four men employed.

Cardrona Colliery, Cardrona (R. McDougall, lessee; D. Scurr, manager).—As in the past, the overburden is sluiced off with water, and the coal mined opencast. A depot has been made at the foot of the mountain, and a large supply of coal stacked up there to keep trade supplied while the road to the pit is impassable during winter months. Seven men have been employed.

Cromwell and Bannockburn Collieries Company, Bannockburn (A. S. Gillanders, mine-manager; T. K. Harty, managing director).—Excelsior Mine (11/10/1904): Operations have been steadily carried on northwards in this mine, and there is now a considerable area of pillars standing. The levels are being pushed on with a view to connecting this mine with Wilson's, which work may be completed within a year. No work has been done to south of main dip as the coal thins somewhat, and the roof is not as good as going northwards. The mine-workings are in good order, with good ventilation throughout.

Wilson's Mine (11/10/1904): Operations at this mine are confined to winning coal for one dredge supply. Mine in good order. Ventilation good.

Kawarau Mine (11/10/1904): Shepherd's Creek, new dip drive: At this mine the main dip has been extended, and is now down 620 ft. in good strong coal. The seam is 15 ft. in thickness in the dip, but thinning to the north and south. There have been two breaks in the roof, followed by a rush of water carrying fine sand from the roof measures. Trouble and expense were incurred in coping with this inflow. The frontage of the seam was found to have been broken by old workings, and considerable difficulty is experienced in unwatering the mine. The company employed an average of thirty-eight men on the several properties throughout the year.

Cairnmuir Coal-pit, Bannockburn (Gibson and Anderson, lessees).—(10/10/1904): A small winding plant has been erected, and an effort is being made to develop the property. Expense has been incurred in shaft-sinking, but the area of workable coal is small. Later information from the manager (James McLelland) is that the steam plant proved incapable of dealing with the haulage and pumping. A dip drive was then tried in another part of the lease, but the drainage met with was in excess of the pumping-capacity. The mine is now idle while an effort is being made to raise capital to provide an efficient plant.

Charles Angel's Coal-pit, Bannockburn.—Opencast pit. A small quantity of coal for private use is taken out.

Nevis Coal-pit, Nevis (Charles Scott, lessee, permit).—(2/12/1904): The seam is vertical. The mine-workings are in good order. A connection is to be made between the upper and lower levels for ventilation. Two men are employed getting coal.

Ryder's Coal-pit, Nevis (Charles Scott, lessee).—(2/12/1904): The lessee is now preparing to open up the property on a more extensive scale. A deep drainage-channel is to be brought up. Two men employed.

Clough and Allen's Coal-pit, Nevis (Mrs. A. Holmes, lessee).—(2/12/1904): The lessee has disposed of this property to C. Scott, lessee of the adjoining pit.

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Gunion's Coal-pit, Nevis (R. Gunion).—(2/12/1904): There was nothing doing at this pit at this date.

Ritchie's Coal-pit, Nevis (Robert Ritchie).—(3/12/1904): The lessee has secured contracts for dredge supplies, and has now two men engaged on the lease. The seam is vertical, and, pending water being brought in for sluicing off the overburden, a drive is being put in.

Graham's Coal-pit, Upper Nevis (A. and S. Graham, lessees).—(2/12/1904): This pit was opened for coal-supply to the Upper Nevis dredge, but this dredge having ceased operations the pit has consequently been closed.

SOUTHLAND.

Pukerau Coal-pit, Pukerau (C. O'Hagan, permit).—(2/5/1904): Mine in good order. Report-book to date. Three men employed.

Nelson's Coal-pit, Pukerau (J. H. Nelson).—(2/5/1904): The pit is unwatered by means of a covered box-drain. Through a collapse in the drain the mine was flooded on the date of my visit. The pit requires a pumping plant.

Mason's Coal-pit, Pukerau (A. Mason).—Coal taken out for private use only.

Milne's Coal-pit, Pukerau (A. Milne).—Coal taken out for private use only.

River View Coal-pit, Gore (L. D. Nicol, owner).—Coal mined for private use only; on freehold land.

Whiterigg Colliery, East Gore (W. H. Paterson, owner: John Hartley, permit).—(29/6/1904): A lignite-seam 18 ft. in thickness; 12 ft. is mined, and 6 ft. left for support of roof. Mine-workings in good order. Good ventilation maintained by means of air-shaft. Compressed powder used, and stored in a suitable locked magazine on the surface. Five men employed.

Heffernan's Coal-pit, East Gore (W. Jones, permit).—(20/5/1904): This pit has been taken over from the late lessee, Thomas Hoffman. A water-level has been driven, and the coal is mined from the Rise section. I draw attention to the necessity for an air-shaft being provided. The coal is strong, and the mine is in good order. Four men employed. (6/9/1904): Mine in good order. Air-shaft now provided.

Rosedale Coal-pit, East Gore (A. Reinke).—(20/5/1904): Pit idle on this date. Lignite mined opencast.

Michael Leitze's Coal-pit, East Gore (20/5/1904).—Lignite mined for private use only.

A. McDonald's Coal-pit, East Gore (W. Gilmour, lessee).—(29/6/1904): This seam is worked opencast, but the output is limited owing to the difficulties experienced by the steepness of the dip of the seam and the lack of water drainage. (6/9/1904): An effort to drive out this coal was not successful, as the seam was too thin and the walls could not be kept up. One man now engaged stripping off the overburden.

Robert Smith's Coal-pit, East Gore.—Coal taken out for private use only on freehold land.

H. Smith's Coal-pit, East Gore.—Coal taken out for private use only on freehold land.

Green's Coal-pit, Gore (J. and J. Smyth, lessees: J. Mason, manager).—(21/6/1904): The mine is in good order and ventilation fair. An air-shaft has been provided. As instructed, the powder-magazine has been removed outside the mine. Suitable powder-canisters are now provided. The new surface tramway from the mine to the depot is now in use. Five men are employed.

Hamilton's Coal-mine, Croydon (John Hamilton, lessee).—(8/3/1904): This mine was opened for dredge supply, but the coal proved inferior and unsaleable. The mine is now closed.

Knapdale Coal-mine, Knapdale (W. Irvine).—Pit closed throughout the year.

Boornwell Coal-pit, Chatton (G. P. Johnston, owner; Thomas Hoffman, lessee).—(7/9/1904): The seam is very strong and the places are driven wide. A water-level has been driven and the coal mined from the Rise section. To win further supplies of coal from the dip would involve heavy outlay in haulage and pumping plant. An air-shaft will be required in the near future. Five men are employed.

Perkins's Coal-pit, East Chatton (A. Perkins, lessee).—(7/9/1904): Several unsuccessful attempts were made to drive out the coal, and the lessee will again resort to the opencast system. Two men employed. (20/12/1904): Two men are engaged stripping and taking out coal. The lessee has now bought an adjoining section from R. Pacey, and the trouble which hitherto existed regarding drainage and disposal of refuse would appear to have now disappeared.

Pacey's Leasehold Coal-pit, East Chatton (R. Pacey, lessee).—(7/9/1904): Lease sublet to James Shepherd and A. Rennie, who are taking out a small block of coal from the boundary. The main pit is flooded. (20/12/1904): The sublease has been cancelled. Very little work has been done on this lease since my previous visit.

Pacey's Freehold Coal-pit, East Chatton (R. Pacey, owner; T. Caldow, manager).—(7/9/1904): This pit has been opened out on private land. Stripping, 8 ft.; coal-seam, 30 ft. A winding plant has been placed on the roadside, and the coal is hauled a distance of 12 chains from the pit to the top of the rise. A suitable locked powder-magazine required. Five men employed. (20/12/1904): This pit is in good working-order. An attempt was made to drive out the coal, but was abandoned through inexperience. Four men employed.

Harvey's Coal-pit, Chatton (20/12/1904): Nothing doing.

Chatton Coal-pit, Chatton.—(20/12/1904): Application has been made by William Dickson and Martin Gerkin for a lignite license over 40 acres, Crown lands, Chatton district.

Otama Coal-pit, Otama (Cross Bros.).—Pit idle throughout the year.

Cross's Coal-pit, Otama (Cross Bros.).—Opencast pit. Coal mined for private use only; on freehold land.

Hunter's Coal-pit, Otama.—Pit idle throughout the year. Face smothered by slips.

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Thorndale Colliery, Waikaka Valley (E. C. Orchard, owner).—(25/2/1904): An attempt is being made in this opencast pit to keep the heavy overburden ahead of the working coal-face, but further improvement is necessary. Three men are employed. This pit has since been sold to Thomas Ritchie and others.

Johnston's Springfield Coal-pit, Waikaka Valley.—(25/2/1904): Opencast pit. Stripping, 10 ft.; lignite, 7 ft. to 10 ft. This pit continues to be worked on good lines. Two men at work. (7/9/1904): This property has been acquired by J. P. McIntyre, farmer, Waikaka Valley. R. Ledlie, the manager, has two men stripping off the overburden and three men on the coal. The pit is in good working-order.

Reed's Coal-pit, Waikaka Valley (Robert Reed, owner; W. Mitchell, manager).—(25/2/1904): Opencast pit. Stripping, 10 ft.; lignite, 15 ft. Acting under instructions, the owner now keeps the stripping well ahead of the working coal-face, thus reducing liability to accident from falls of clay. Five men employed. (3/5/1904): Pit in good working-order. Stripping well attended to. (6/9/1904): Pit in good order. Explosives used with care. Five men employed.

McGill's Glenlee Coal-pit, Wendon Valley (D. T. McGill, permit).—The mine is safe, and in good working-order. Compressed powder used with care. Two men employed.

McDonald's Coal-pit, Wendon Valley (A. A. Edge, lessee; S. Coulter, permit).—(6/9/1904): This mine was idle during the greater part of the year. Since resuming operations a small winding plant has been erected on the dip head. The dip is now driven a distance of 120 ft. The seam is 16 ft. in thickness, of which 5 ft. is left to form the roof. The mine is in good working-order. Four men are employed.

Edge's No. 14 Coal-pit, Wendon Valley (A. A. Edge, lessee; S. Coulter, permit).—(26/2/1904): This property of 5 acres is leased from the School Commissioners. Since last inspection the pillars have been robbed from the rise section with a view to closing the upper portion of the mine. In order to win further supplies of coal from the dip section a pumping and haulage plant would be required. The trade of the district does not warrant the necessary expenditure at present. A suitable powder-magazine has been provided. Four men employed.

P. Bushbridge's Coal-pit, Wendon Valley.—(26/2/1904): An opencast pit. Supplies mined during summer months for winter use.

Perkins's Coal-pit, Wendon Valley (George Perkins).—Coal mined for private use only.

Henderson's Coal-pit, Wendon Valley.—A private pit.

Stevenson's Coal-pit, Coal Creek, Wendon.—This venture has been abandoned. No coal mined during the year.

Radford's Coal-pit, Wendon (E. and P. Radford, lessees).—This coal-pit was idle for a considerable time, but was reopened during the year. The opencast pit has been abandoned and a dip drive put in.

Waikaia Collieries Company, Waikaia (James Holland, lessee; W. G. McKay, permit).—(23/2/1904): A new dip drive has been driven a distance of 50 ft. into the seam, which is 10 ft. in thickness. The coal is being mined to a height of 6 ft., the remaining 4 ft. being left overhead. The existing pumping plant has been supplemented by a smaller pump placed in the dip bottom. A good class of timber is in use and the drive is secure. I instructed the manager to provide a suitable locked powder-magazine, and also to procure copies of the general and special rules for posting at the mine-mouth. Five men employed in and about the mine, from which supplies of coal are obtained for two gold-dredges. (14/5/1904) (Robert Ross, permit): The mine is in good order and development-work is going ahead. Preparations are being made for an air-shaft in the eastern section of the mine. The coal is strong, and timber is well used in the working-places. (27/6/1904): The main pump had been placed in the dip bottom, a stoppage was caused through the boiler-tubes bursting, and before repairs could be effected the water had risen and covered the pump. It is probable the mine will not be unwatered, the venture having been a losing one to the proprietors.

Nelson's Coal-pit, Landslip, Waikaia (John Nelson, owner; James Muirhead, manager).—(24/2/1904): The area is being prospected by driving and shaft sinking. (14/5/1904): A drive is being put in which will strike the coal-seam in the floor. (26/8/1904): The seam has been proved at 10 ft. in thickness, with a dip of 1 in 8. Unfortunately, the seam is much broken and the joints are filled with clay and gravel. A shaft is being sunk to serve for ventilation and second outlet. The mine was in good order. I instructed the manager to procure copies of the general and special rules, and to provide a suitable locked magazine. (26/10/1904) (James Duncan, mine-manager): On the 12th September, 1904, the main drive collapsed. Previous to this there had been a spell of extremely wet weather. As there is very little cover on this seam, the wet evidently gained access to the mine through the workings. As a result the bottom became softened, and a crush took place in the main drive, which had been driven through the underlying measures to strike the seam. This section of the property has been abandoned, and a sublease given to Robert Rear and C. Archer, who are at present putting in a new drive.

McIvor's Coal-pit, Landslip, Waikaia (R. McIvor, lessee).—(28/6/1904): A dip drive has been driven to reach the coal, but nothing further has been done. This seam was previously worked opencast.

McIvor's Coal-pit, Landslip, Waikaia (R. McIvor, permit, lessee).—(28/6/1904): A dip drive has been put down in the seam, which here averages 12 ft. in thickness; 3 ft. of coal left to form roof. A suitable locked powder-magazine not provided. General and special rules posted. Three men employed. Sluicing operations are still being carried on in the opencast section of the mine. (26/10/1904) (James Duncan, mine-manager): The mine is in good order. The coal being strong not much timber is required. Bords are driven 9 ft. wide, and pillars are left 15 ft. by 20 ft. I advised that the pillars be made larger. Four men are employed underground. Ventilation is maintained by a

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heading driven to the surface. Three men employed in the opencast. McIvor's lease of 10 acres has since been purchased by the Landslip Coal-mining Company, which is composed principally of investors holding dredging interests in the Waikaia district. A new winding and pumping plant is to be installed.

Muddy Terrace (Shale-pit), Waikaia (T. F. Goldie).—(26/10/1904): Opencast pit. Overlying burden well stripped back. Pit in good order. Three men employed.

No. 1 Coal-pit, Landslip, Waikaia (A. McKinnon).—(26/10/1904): Mine in good order. Ventilation good. Several men are employed bringing up a deep tail-race, about 8 chains in length, in order to get an entrance at a lower point to the dip of the seam.

Argyle Coal-pit, Upper Waikaia (J. and T. Baxter).—(25/10/1904): This pit is still worked opencast. The trouble experienced in the past with slips from the high country is not now so great. Two men at work.

Ed. Vial's Pit, Happy Valley, Waikaia.—(25/10/1904): Pit idle throughout the year.

G. S. Vial and D. Gillespie, Robson's Run, Waikaia.—(25/10/1904): The seam dips sharply, and in the absence of a good road and suitable machinery to develop the pit the venture was abandoned.

Waimea Coal-pit, Longridge Village, Waimea.—This pit has been idle throughout the year.

Roderick McKenzie's Coal-pit, Blackmount Station, Takitimo District.—A pit opened to supply private requirements.

Pyramids Coal-pit, Mandeville (E. Macallister, owner; W. and J. Hollows, lessees).—During the early part of the year 305 tons of coal was mined by Junker and party. In May the mine was leased to W. and J. Hollows, who have since worked the property continuously. The property was tested by boring, with a view to determining the coal-bearing area, which, however, did not prove to be of great extent.

Waimumu Coal-pit, Mataura (C. P. Sleeman, owner).—(25/6/1904): This pit continues to be worked in good order. Stripping kept well advanced from working coal-face. Nine men employed in and about the pit.

Bogside Colliery, Mataura (Mutch and Hurst, lessees; A. D. McIlraith, owner).—(25/6/1904): Pit idle. Nothing done for some time. The pit has since been reopened by A. Cameron.

Mataura Lignite-pit, Mataura (Beattie, Coster, and Co., owners; W. Coster, manager).—(25/6/1904): Opencast pit in good order. Three men employed getting coal, and three stripping in advance. Suitable powder-magazine and canisters provided.

McGilvray's Coal-pit (late Mutch's), Mataura.—Lignite taken out for private use only, but 110 tons of hæmatite supplied to Mataura Paper Mills during the year.

Waimumu Colliery Company (late Duthie's), Waimumu (W. J. Williams, manager; H. W. Royds, secretary, Invercargill).—(26/6/1904): This property is worked opencast and has been opened out on an extensive scale. The pit is in good order. 3,504 tons of lignite was raised during the year and supplied principally to dredges in the Waimumu Valley.

Nightcaps Colliery, Nightcaps (J. Lloyd, mine-manager; William Handyside, managing director).—(16/6/1904): No. 2 section being extensively robbed, roof falls to surface, consequently remaining pillars relieved from undue pressure. Timber plentifully used as required. The dip section of work, also rise section recently on fire, are being reopened and cleaned up with a view to coal-production, the damage done by the fire having proved of a less permanent nature than might have been expected. (19/10/1904): Mine in good working-order throughout. Timber well used and plentiful supply on hand. The pillars in the lower dip workings have been enlarged to 24 ft. square. Ventilation good throughout the mine. I found the upcast air-shaft and fan in good order.

Hit or Miss Mine, Nightcaps (D. Tinker).—(20/10/1904): When the present workings have reached the boundary the pillars will be drawn. Mine in good order. Timber well used. Ventilation good. Two men employed.

Lamont's Coal-mine (H.B.), Nightcaps.—(20/10/1904): A small area of coal has been stripped. One man at work.

Morley Coal-pit, Nightcaps (George R. Spence).—(20/10/1904): One man at work stripping an area of coal.

Mount Linton Station Pit, Nightcaps (Mrs. Chalmers).—Nothing has been done during the year.

Remarks.

The output of coal and lignite (Southern District) for the year 1904, amounted to 458,371 tons, an increase of 28,969 tons over the previous year.

Returns of output from the provinces are as follows:—

	Tons.
Canterbury	25,120
Otago	320,681
Southland	112,570
Total	458,371
Output for previous year	429,402
Increase	28,969

The contributions by coal-owners to the Coal-miners' Relief Fund amounted to £458 19s. 9d., while payments from the fund to the amount of £537 19s. 10d., have been recommended on account of accidents which have occurred in and about coal-mines in this district during the year.

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ACCIDENTS.

A total of 138 accidents were reported to me during the year, of which two resulted in death, one being instantaneous death, and the second, death by blood-poisoning subsequent to an operation twenty days after the accident, which was not at first considered serious. Of the remaining accidents it is to be observed that a large proportion did not come within the meaning of section 55 of "The Coal-mines Act, 1891," whereby the manager of every mine is bound to notify the Inspector of every accident attended with serious injury to any person employed in the mine, but were so reported to me for the purposes of the administration of the Coal-miners' Relief Fund, there being no Sick and Accident Fund in connection with any miners' association in the district.

Fatal Accidents.

10th October, 1904.—Thomas Foster, trucker, Allandale Colliery: Slipped on a rail while trucking, causing inflammation of sheath of tendon of left knee. Blood-poisoning supervened and proved fatal on the 1st November, 1904.

24th October, 1904.—Adam Thomson, miner, Kaitangata Mine: Instantaneously killed by fall of coal from roof at lip of waste, five yards back from his working-face.

Non-fatal (Serious).

11th January, 1904.—William Dixon, miner, Nightcaps Colliery: Wound of cornea and traumatic cataract resulting in loss of sight, caused by piece of coal flying from pick-point while holing.

10th February, 1904.—Chas. P. Penman, miner, Kaitangata Mine: Injury to eye, necessitating removal of same, caused by dirt flying from face of hammer while drifting a prop.

11th March, 1904.—John Burns, horse-driver, Kaitangata Mine: Fracture of leg, caused by fall of roof and side through boxes getting off the road and bringing down three sets of timber in haulage-road.

4th May, 1904.—William Cairns, miner, Kaitangata Mine: Fracture of left leg below knee, caused by fall of coal while robbing a pillar.

22nd July, 1904.—Henry A. Jones, miner, Kaitangata: Sprained ankle and bruised back—struck by piece of stone which fell from the roof at the coal-face.

6th August, 1904.—Henry Nicol, miner, Homebush Colliery: Strained and bruised back, caused by piece of stone which fell from roof at coal-face.

I have, &c.,
E. R. GREEN,
Inspector of Mines.

The Under-Secretary for Mines, Wellington.

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APPENDIX I.

MINE-MANAGERS' EXAMINATION-PAPERS.

Questions used in Examination of Mining Managers for First- and Second-class Certificates.

Subject No. 1.—*On Prospecting, Sinking, Tunnelling, and opening out a Colliery.*

1. Describe briefly the indications by which you would be guided in searching for coal in a new field, and what steps you would take to prove the existence of coal in the absence of outcrops.

2. If placed in charge of the development of a new colliery, what are the most important points to be decided before starting to sink shafts, and what are the conditions upon which you would decide the position of and size of shafts?

3. Describe fully the character of the preparations required and kind of plant you would employ in sinking a shaft to a depth of 1,000 feet, assuming feeders of water to be 500 gallons per minute down to 400 feet from surface, the balance of the sinking being free from water.

4. Assuming the shaft has reached the coal, which is found to be 6 feet thick with good roof and soft floor, show by sketches how you would open out workings, giving the arrangement at shaft-bottom, dimensions of pillars surrounding the shaft, and direction of air-currents through the workings to the up-cast shaft.

5. How would you ventilate a shaft during sinking? Show by sketch the method and arrangement for ventilating below the scaffold when lining a shaft with brickwork.

6. Describe, and show by sketch, how cast-iron tubbing is applied to lining shafts, and state the conditions under which you would adopt same and the pressure that would be produced on tubbing with a head of water 250 feet.

Subject No. 2.—*On working Coal and timbering underground.*

1. Describe the method of working any seam of coal with which you are practically acquainted, and illustrate by sketches the position of main haulage-roads with branch headings and return air-course.

2. Assume a seam of coal containing a stone band 9 inches thick, top coal 12 inches, and bottom coal 4 feet: how would you open out and work such a seam?

3. Show by sketches the different systems in vogue for timbering in coal-mines, both in flat and highly inclined seams.

4. Give reasons for requiring to draw timber, precautions to be observed, and tools used.

5. Give description of mode of working in a long-wall face, the seam being 5 feet thick, with heavy roof; and make sketch showing how you would place timbers for supporting roof.

6. What precautions would you adopt to avoid danger arising from blown-out shots in coal-mines? and state what is, in your opinion, the principal cause of such.

7. Give a description of the system or systems upon which you have known thick coal to be worked.

Subject No. 3.—*On the Gases of Mines, Spontaneous Combustion, and Ventilation.*

1. Name the two gases most commonly met with in coal-mines, and describe their composition and properties.

2. Given the opening-up of a colliery in a coalfield well known to be liable to spontaneous combustion, how would you arrange the workings so as to minimise the risk from fire?

3. Say what is meant by natural ventilation, and show by sketch how produced. Also describe the use of the barometer, thermometer, and water-gauge in connection with mines.

4. Sketch what is, in your opinion, a good form of air-crossing.

5. What benefits are to be gained by increasing the size of airways, and what effect has splitting the air on the ventilation of mines?

6. Find the total quantity of air per minute passing in an air-course 12 feet by 7 feet, at a pressure of 7.5 lb. per square foot.

7. If the total quantity of air passing in a mine is 120,000 cubic feet per minute, with a 2 in. water-gauge, the fan-engine cylinder being 19 inches diameter by 3 feet 6 inches stroke, making 45 revolutions a minute, steam-pressure (effective) 50 lb. per square inch, what would be the fan's efficiency?

Subject No. 4,—*On dealing with Old Workings and other Sources of Danger.*

1. What danger is to be apprehended when a colliery giving off firedamp, and having workings to the rise, and which has been drowned out, is being reopened by pumping the water out?

2. In approaching old workings what precautions would you adopt?

3. Sketch the various kinds of dams used for holding back water in mines, and state precautions necessary in selecting site for a dam and to insure safety in its construction.

4. If accumulations of explosive or other poisonous gases should be met with in a mine, what steps would you take in dealing with same?

5. State your experience with regard to blasting in gassy and dusty mines; and (*a*) name the explosive you have been accustomed to, and (*b*) state arrangements you had for blasting under various circumstances.

6. What are slips or backs, and what precautions should be taken to protect workmen where these exist?

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SUBJECT No. 5.—*On Steam Boilers and Engines used about Collieries.*

1. What are the requirements of the Coal-mines Act with regard to steam-boilers?
2. If in consequence of a deficient supply of water the flue of a Lancashire boiler had become overheated, what precautions would you take?
3. Show by calculation how you ascertain the bursting-pressure and safe-working load for a steam-boiler.
4. Requiring an engine of 50 effective horse-power, show by calculation size of cylinder, length of stroke, and pressure of steam you would use.
5. State horse-power of engine required to drive a ventilating-fan producing 100,000 cubic feet of air per minute, water-gauge to be 2·5 inches.
6. Describe some of the principal methods of transmitting power from the surface to workings underground, and state what your experience has been (if any) in the use of electrical power.

SUBJECT No. 6.—*On Mine Drainage and Haulage, and Appliances for same.*

1. It is required to raise 300 gallons of water per minute from a mine 300 yards deep: give a general outline of the plant you would adopt for the work.
2. If required to pump 200 gallons per minute from a dip working the inclination of which is 1 in 6 and length 50 chains, what plant would you use and what horse-power would be required?
3. What will be the horse-power of a hauling-engine necessary to haul 500 tons of coal in 8 hours along a road rising 1 in 10, direct-haulage single rope being used?
4. State what is, in your opinion, the most economical system of haulage for large outputs, and give sketches illustrating same.
5. Give sketch showing side and end view of mine-tub capable of carrying 15 cwt. (give figured dimensions).
6. Having to wind 500 tons per day of 8 hours from a shaft 1,000 feet deep, what size and style of engine would you apply? Give dimensions of cylinders, diameter of drum, and size of rope; also show by sketch where you would place engine in relation to shaft and pit head, frame and pullies in position (give figured dimensions).

SUBJECT No. 7.—*On Geology, Surveying, and making of Plans.*

1. Give a sketch of a fault in a coal-seam. Illustrate the method usually adopted in measuring the amount of throw and in showing the fault on a colliery plan.
2. Describe how you would ascertain and record the levelling of the surface between two points which are not visible to you from each other.
3. Find the acreage of a field which has two sides parallel and its other two sides equal to one another, the parallel sides being respectively 360 and 240 links and the other sides 100 links long.
4. Candidates to produce a plan showing the workings of a colliery with the surface taken up for at least 20 acres in the vicinity of the shaft or adit, the workings to be shown in colours. The connection between the surface and underground must be shown and described in the event of there being only one shaft. The levels and main headings must have assumed traverse calculated in detail, and showing latitude and departure for each bearing. The plan to be candidate's own work, and to be accompanied by field-book.
5. Plot the following bearings with protractor and scale, and calculate the latitude and departure, and give the course and length of the 5th set to tie with the start of 1st set:—

1. N. 30° W., 500 links.	3. S. 65° E., 450 links.
2. N. 15° E., 750 "	4. S. 20° E., 500 "

6. What means would you adopt to prove accuracy of an underground survey?

SUBJECT No. 8.—*Arithmetic, and a Knowledge of the Coal-mines Act.*

1. A pillar of coal contains 5 tons 13 cwt. 2 qr. 19 lb.: what is the weight in pounds?
2. If a drive is 45 yards long by 6½ feet high and 8 feet wide, how many cubic feet of air would it contain?
3. If the average cost of sinking a shaft 450 yards deep be £23 per yard, and 25 per cent. of the strata being hard rock costing 40 per cent. more than the average of £23, what will be the cost per yard of the remaining 75 per cent.?
4. Surface of a solid cube has an area of 11·904 square inches: how many cubic feet does the solid contain?
5. How many gallons will a pump throw in 12 hours, dimensions being 24 inches diameter, 8 feet stroke; speed, 9 strokes per minute?
6. Briefly state requirements of Coal-mines Act as to—
   (*a.*) Manager's duties and responsibilities;
   (*b.*) Under-manager's duties;
   (*c.*) Storage of explosives;
   (*d.*) Safety lamps and signals.

SUBJECT No. 1.—*On Prospecting, Shaft-sinking, Tunnelling, and opening out a Colliery.*

1. State what experience you have had in prospecting for coal, and the indications upon which you would rely to prove the existence of coal in a new field.
2. How would you proceed to sink a shaft 14 feet diameter with the knowledge that a bed of quicksand existed 20 feet from the surface?
3. How would you ventilate a shaft to be sunk to a depth of 500 feet?
4. Give sketch of the plans you would adopt in opening out a new mine, and give figures showing size of pillars you would leave for supporting shaft, depth of which is assumed to be 500 feet.
5. Show by sketches how you would open up a road through fallen ground rising one in six, giving dimensions and plan of timbering.

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SUBJECT No. 2.—*On working Coal and Timbering underground.*

1. Describe the different systems of working coal with which you are acquainted, and under what conditions as to thickness and nature of coal, roof, and floor you would adopt one system in preference to the others, keeping in view the getting of the coal in the most marketable condition.

2. Sketch and describe by side and end views how you would retimber a main road having a soft roof, the road being 10 feet wide by 6 feet in the clear. State kind and size of timber to be used.

3. Many accidents are caused by falls of roof and sides in working coal: state what steps you would take to prevent such.

4. What seams with which you are acquainted work better by long-wall than by bord and pillar, and why?

5. Explain what explosive you would use, and how you would conduct the operation of shot-firing in a dry and dusty mine where gas is sometimes found.

SUBJECT No. 3.—*On Gases of Mines, Spontaneous Combustion, and Ventilation.*

1. Name the gases most commonly met with in coal-mines, and give your experience in dealing with same

2. Describe by sketch a method of bratticing the bords and headings in seam of coal 8 feet thick; pitch of seam, 1 in 4; bords, 18 feet wide; and pillars, 15 yards thick and 50 yards from heading to heading.

3. What practical experience have you had in the ventilation of collieries, and how do you prefer that ventilation should be produced, by furnace or fan? Give reasons for preference.

4. What are the provisions of the Coal-mines Act in reference to ventilation?

5. Give your experience in dealing with underground fires, and say what, in your opinion, is the cause of outbreaks of fire underground.

SUBJECT No. 4.—*On dealing with Old Workings and other Sources of Danger.*

1. What are the precautions to be observed in approaching old workings likely to contain accumulations of water? Describe fully.

2. If confronted with a sudden inrush of firedamp, what steps would you take for safety of miners and to effectually clear the mine?

3. What are the provisions of Coal-mines Act in relation to spragging, and why is this precaution necessary?

4. How would you ventilate a dip heading where black damp is given of freely?

5. Why is it dangerous to use the Davy or Clanny lamp unprotected? Describe some form of lamp of which you have experience? What is the most explosive mixture of gas and air?

SUBJECT No. 5.—*On Mine Drainage and Haulage, and Appliances for same.*

1. Describe your experience in the drainage of mines, and what is, in your opinion, the most efficient pump for this purpose.

2. Describe the natural law which governs the working of pumps and siphons.

3. Describe what, in your opinion, is the best system of haulage for application underground, stating your reasons for preference.

4. What is meant by the term "self-acting inclines"? and state conditions under which such are applicable and precautions to be adopted for safety of persons employed in connection with them.

5. What are the requirements of the Coal-mines Act with regard to manholes on underground inclines and engine planes?

SUBJECT No. 6.—*Arithmetic, and Knowledge of Coal-mines Act.*

1. There are 200 fathoms of roadway to be timbered every 2 feet with props 5 feet long on each side of the road: how many lineal feet of prop timber will be required; also what length of timber will be needed for cap pieces, each cap being 10 feet long?

2. In an airway 6 feet by 10 feet the velocity of the current is 5 feet per second, how many cubic feet of air passes per minute?

3. A tub for drawing water from a shaft is 4 feet long by 3 feet 6 inches diamenter; the rate of winding is 40 tubs per hour: how many gallons will be drawn per minute, allowing 1-10th for leakage?

4. If an adit or heading rises 84 feet in a total length of 1,500 yards, what is the rise per yard?

5. State the requirements of the Coal-mines Act as to—

(*a.*) Hours of boys;

(*b.*) Fencing of disused places;

(*c.*) Duties of underground manager and fireman respectively.

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APPENDIX II.

LIST of PERSONS who have obtained CERTIFICATES as MINE-MANAGERS under the Coal-mines Acts of 1886 and 1891.

THE COAL-MINES ACT.

FIRST-CLASS MINE-MANAGERS' CERTIFICATES.

Issued under the Coal-mines Acts, 1886 and 1891.

Aitken, T., Wendon.
Alexander, T., Brunnerton.
Austin, J., Sheffield.
Binns, G. J., Dunedin.
Bishop, J., Brunnerton.
*Brown, T., Westport.
Brown, T., Glentunnel.
Cameron, J., Denniston.
Campbell, J. C., Fairfield.
Cochrane, N. D, Dunedin.
Collins, W., Taupiri.
Dando, M., Brunnerton.
*Elliott, R., Wallsend.
Ferguson, A., White Cliffs.
Freeman, J., Green Island.
*Geary, J., Kamo.
Gray, J., Abbotsford.
*Harrison, J., Brunnerton.
Irving, J., Kaitangata.
Jemison, W., Waimangaroa.
Kenyon, J., Shag Point.
Kerr, G., Kamo.
Lindsay, W., Otago.
Lloyd, J., Invercargill.
*Louden, J., Green Island.
Love, A., Whangarei.
Mason, J., Nightcaps.
May, J., Greymouth.
Moody, T. P., Kawakawa.
Moore, W. J., Springfield.
Nelson, J., Green Island.
Ord, J., Huntly.
*Redshaw, W., Whangarei.
Reed, F., Westport.
*Richardson, D., Abbotsford.
Shore, J., Kaitangata.
Shore, T., Orepuki.
*Shore, W. M., Kaitangata.
*Smart, W., Christchurch.
Smith, A. E., Nelson.
Smith, T. F., Nelson.
Sneddon, J., Mosgiel.
Swinbanks, J., Kawakawa.
Taylor, E. B., Huntly.
Thompson, A., White Cliffs.
Walker, J., Collingwood.
Williams, W. H., Shag Point.

First-class Certificates issued after Examination under the Coal-mines Acts, 1886 and 1891.

Armitage, F. W., Auckland.
Armstrong, J., Brunnerton.
Barclay, T., Kaitangata.
Barclay, W., Kaitangata.
Bennie, Boyd, Waihi.
Campbell, Peter, Fairfield.
Carruthers, J., Shag Point.
Carson, W., Kaitangata.
Coombe, J., Waihi.
Coulthard, J., Taylorville.
Dixon, C. W., Granity.
Dixon, W., jun., Kaitangata.
Duggan, George, Burnett's Face.
Dunn, Andrew, Denniston.
Dunn, W., Brunnerton.
Dunn, W. R., Thames.
Elliott, R., jun., Denniston.
Fleming, J., Kaitangata.
Fletcher, James, Granity.
Fry, Sydney, Waimangaroa.
Gibson, John, Westport.
Gillanders, A., Shag Point.
Gowans, W., Millerton.
Green, E. R., Abbotsford.
Green, J., Brunnerton.
Herd, J., Brunnerton.
Hill, Robert, Abbotsford.
Hosking, G. F., Auckland.
*Hughes, D., Preservation Inlet.
Jebson, D., Canterbury.
Johnson, W. P., Thames.
Leitch, J., Blackball.
Leitch, W., Blackball.
Marshall, A. G., Denniston.
McCaffrey, Patrick, Ferntown.
McCormack, W., Denniston.
McEwan, Robert, Coromandel.
McGeachie, J., Mokau.
Milligan, N., Westport.
Morgan, Wm., Waihi.
Murray, T., Westport.
*Newsome, F., Denniston.
Newton, James, Brunnerton.
Shore, Joseph, Kaitangata.
Smith, George, Fairfield.
Sowerby, H., Denniston.
Tattley, E. W., Huntly.
Tattley, F. J., Mercer.
Taylor, A. H., Waikato.
Turner, G. F., Shag Point.
Westfield, C. H., Fairfield.
Young, James H., Waimangaroa.

Mine-managers' Certificates, issued on Production of English Certificate, under "The Coal-mines Act, 1886."

Binns, G. J., Dunedin.
Black, T. H., Waipori.
Broome, G. H., Ngakawau.
Cater, T., Auckland.
Cochrane, N. D., Dunedin.
*Garrett, J. H., Auckland.
Hayes, J., Kaitangata.
Hodgson, J. W., Ross.
*Lindop, A. B., Springfield.
Macalister, J., Invercargill.
*Nimmo, J., Oamaru.
*Straw, M., Westport.
Tattley, W., Auckland.

First-class Mine-managers' Certificates, issued to Inspectors of Mines by virtue of Office, under the Coal-mines Acts of 1886 and 1891.

Coutts, J., Thames.
Gordon, H. A., Wellington.
*Gow, J., Dunedin.
McLaren, J. M., Thames.
Wilson, G., Thames.

Mine-managers' Certificates, issued on Production of Certificate from a recognised Authority outside the Colony, under "The Coal-mines Act, 1891."

Alison, R., Greymouth.
Dixon, J., Westport.
Fletcher, George, Westport.
Frame, Joseph, Kaitangata.
Goold, A. L., Auckland.
Irvine, James, Dunedin.
*Jordan, R. S., Kaitangata.
Kirkwood, D., Coromandel.
Lewis, W., Blackball.
Pollock, James, Green Island, Otago.
*Proud, Joseph, Wanganui.
Scott, Joseph, Ngahere.
Tennent, R., Brunnerton.
Twining, C. E., Dunedin.
Wight, E. S., Auckland.
Wood, William, Mokihinui.

SECOND-CLASS MINE-MANAGERS' SERVICE CERTIFICATES.

Issued under "The Coal-mines Act, 1891."

Carson, M., Kaitangata.
Collier, Levi, Kamo.
Clarke, Edward, Shag Point.
Elliot, Joseph, Coal Creek.
Harris, John, Denniston.
Herd, Joseph, Brunnerton.
Howie, James, Kaitangata.
Leeming, William, White Cliffs.
Lennox, W., Springfield.
Lobb, Joseph, Mokau.
Longstaff, H. C., Kaitangata.
Love, Alexander, Orepuki.
McGeachie, J., jun., Mokau.
McIntosh, Allan, Shag Point.
McLaren, J. M., Thames.
Marshall, J., Ngakawau.
Murray, Thomas, Denniston.
*Nimmo, George Stewart, Ngapara.
Radcliffe, William, Reefton.
*Roberts, John, Brunnerton.
*Ross, John, Kawakawa.
Sara, James, Reefton.
Smith, Charles, Whangarei.
Thomas, James, Springfield.
Wallace, William, Huntly.
Willetts, John, Papakaio.
*Willetts, John Morris, Papakaio.
Young, William, Waimangaroa.

Second-class Certificates issued after Examination under the Coal-mines Acts, 1886 and 1891.

Austin, W. B., Sheffield.
Barber, John, Shag Point.
Barclay, T., Kaitangata.
Barclay, T., jun., Kaitangata.
Barclay, Wm., Kaitangata.
Barnes, A. E., Shag Point.
Brown, Robert, Kaitangata.
Cadman, J., Hikurangi.
Campbell, Peter, Fairfield.
Cherrie, R. C., Mokau.
Christie, James, Saddle Hill.
Clemo, G., Whangarei.
Craig, John, Coal Creek Flat.
Dixon, W., jun., Kaitangata.
Doel, G., Lovell's Flat.
Duncan, James, Kaitangata.
Duncan, J. E., Kaitangata.
Duncan, John, Lovell's Flat.
Fox, R. A., Blackball.
Harris, A., Saddle Hill.
Hill, R., Abbotsford.
Hodson, John, Kaitangata.
Hunter, A., Southland.
Lindsay, J. B., Orepuki.
McAllister, Neil, Kaitangata.
McLelland, J., Kaitangata.
McLelland, A. C., Kaitangata.
McNeill, D., Fairfield.
Neilson, Moffat, Abbotsford.
Olivie, W. W., Saddle Hill.
Orr, Hugh, Fairfield.
Parcell, W., jun., Bannockburn.
Penman, C. P., Kaitangata.
Snow, T., Mercer.
Tattley, F. J., Mercer.
Taylor, Joseph, Collingwood.
Waldie, A. B., Mokau.
Westfield, C., Fairfield, Otago.
Whitleston, A. W., Shag Point.

*Deceased since issue of certificates.

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APPENDIX III.

Statistics of Workings in Coal-mines, 1904.

Name of Mine and Locality.	Name of Manager.	Number of Years worked.	Quality of Coal.	No. of Seams worked.	Thickness of Seams.	Thickness worked.	Dip of Seam.	System of Underground Working.	Number of Shafts.	Dimensions of Shafts.		Output delivered by	Output for 1904.			Approximate Total Output to 31st December, 1903.	Approximate Total Output to 31st December, 1904.	Number of Men ordinarily employed.			Power used for drawing Mineral.	Pumps.			Means of Ventilation.	Date of Inspector's Last Visit.
										Size of Shaft or Adit.	Depth of Shaft or Length of Adit.		Coal.	Slack.	Total.			Above.	Below.	Total.		Stroke.	Size of Barrel.	Height of Column.		
NORTH ISLAND.																										
													Tons.	Tons.	Tons.	Tons.	Tons.									
Kawakawa District.																										
Kawakawa (*stopped*) ..	..	..	semi-bitum.	..	..	..	..	bord and pillar	..	..	..	..	..	..	..	794,865	794,865	..	..	..	..	..	..	..	..	..
Kawakawa Mine	Culley, John (permit)	6	"	1	5′	5′	1 in 7	"	1	6′ x 4′	200′	adit	3,512	..	3,512	66,412	69,924	2	4	6	horse	..	..	..	natural	20/10/04
Hikurangi District.																										
Hikurangi Coal Company ..	Moody, T. P. ..	12	"	1	7′ to 12′	7′ to 10′	1 in 6	"	2	6′ x 5′	264′	"	44,974	..	44,974	315,620	360,594	6	50	56	steam	10″	8″	50′	"	19/10/04
Northern Coal Company ..	Dunn, W. R. ..	7	"	1	6′ to 8′	6′ to 8′	1 in 9	"	2	6′ x 6′	1,320′	"	25,719	..	25,719	75,310	101,029	15	30	45	manual & loco.	..	..	..	"	19/10/04
Phœnix and West Bryan's ..	Kirkwood, D. ..	16	"	1	10′	8′	1 in 7	"	1	6′ x 4′	260′	"	5,043	..	5,043	69,287	74,330	4	12	16	steam	7½″	6″	40′	"	19/10/04
Walton and Graham's ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,210	1,210	..	..	..	..	..	..	..	..	..
Whangarei District.																										
Kamo (*stopped*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	225,037	225,037	..	..	..	..	..	..	..	..	..
New Kamo (*stopped*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9,373	9,373	..	..	..	..	..	..	..	..	..
Whauwhau (*stopped*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	70,853	70,853	..	..	..	..	..	..	..	..	..
Ngunguru District.																										
Ngunguru Mine	Taylor, A. H. ..	12	semi-bitum.	1	2′ to 4′	2′ to 4′	1 in 9	bord and pillar	3	3′ x 3′ 3′ x 4′ 6′ x 6′	20′ 35′ 920′	adit	14,367	..	14,367	168,768	183,135	10	36	46	steam	..	..	..	natural	15/11/04
Panipo (Kiripaka)	Clemo, George ..	5½	"	1	3′ to 18′	2′ to 12′	1 in 4	"	1	7′ x 5′	396′	"	12,604	..	12,604	55,002	67,606	3	15	18	horse	..	..	..	"	15/11/04
Waikato District.																										
Waikato Mine (*stopped*) ..	..	..	brown	..	..	..	..	..	..	..	..	..	..	..	..	209,089	209,089	..	..	..	..	..	..	..	..	..
Taupiri Extended	Wight, E. S. ..	16½	"	1	10′ to 30′	20′	1 in 10	bord and pillar	2 2	10′ dia.	166′ 209′	shaft	28,299	6,702	35,001	659,200	694,201	13	46	59	steam	24″ 12″	10″ 5″	166′ 210′	fan	24/10/04
Taupiri Reserve	"	17½	"	1	10′ to 24′	18′	1 in 8	"	2	7′ dia.	50′	adit	14,182	1,046	15,228	280,100	295,328	7	28	35	"	12″	5″	220′	steam-exha'st	26/10/04
Ralph's Taupiri	"	11½	"	1	10′ to 50′	20′	1 in 10	"	2	8′ x 6′ 9′ 6″ x 5′ 8′ 6″ dia.	190′ 145′	shaft	56,248	9,984	66,232	235,578	301,810	21	109	130	"	12″ 24″	7″ 6″	190′ 260′	fan	25/10/04
Ralph's (*stopped*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	23,019	23,019	..	..	..	..	..	..	..	..	..
Harrison's	Davis, Edward (permit)	3	brown	1	24′	24′	1 in 7	opencast	..	..	..	..	215	..	215	10,622	10,837	6	..	6	steam	..	..	..	..	25/10/04
Mokau District.																										
Mangapapa Mine	Bennie, Boyd ..	20	"	1	6′ to 8′	6′ to 8′	1 in 10	bord and pillar	1	9′ x 6′	1,200′	adit	4,280	..	4,280	35,722	40,002	3	10	13	horse	..	..	..	furnace	26/9/04
Fernside (*stopped*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3,265½	3,265½	..	..	..	..	..	..	..	..	..
Co-operative (*stopped*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	940	940	..	..	..	..	..	..	..	..	..

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Miranda District.																												
Miranda (*stopped*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20,668	20,668	..	..	..	..	..	..	..	..	..
Union Collieries	Tattley, William	4	brown	1	55′	20′ to 24′	variable	bord and pillar	2	4′ x 4′ 6′ x 6′	90′ 200′	adit	15,342	..	15,342	10,493	25,835	11	18	29	steam	12″ 6″	6″ 5″	90′	steam-exhaust	26/8/04
Bombay District.																												
Bombay (*stopped*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	81½	81½	..	..	..	..	..	..	..	..	..
Totals North Island	..	..	..	..	..	..	..	..	..	..	..	..	..	224,785	17,732	242,517	3,340,515	3,583,032	101	358	459							

MIDDLE ISLAND.

Nelson.																												
Enner Glynn (*not at work*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,337	1,337	..	..	..	..	..	..	..	..	..
Collingwood.																												
Pakawau (*not at work*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4,873	4,873	..	..	..	..	..	..	..	..	..
Puponga	McCaffrey, P. ..	3	bitum.	1	7′ to 6′	7′ to 6′	1 in 4	bord and pillar	..	9′ x 6′ 6″	900′	engine plane	12,268	167	12,430	2,102	14,532	18	48	66	steam-engine	..	..	..	natural	31/11/04
Wallsend (*not at work*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	47,413	47,413	..	..	..	..	..	..	..	..	..
Takaka.																												
Mines not at work.																												
Motupipi	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	130	130	..	..	..	..	..	..	..	..	..
Takaka	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	70	70	..	..	..	..	..	..	..	..	..
Westport.																												
Mokihinui Co-operative Coal-mine	Ratcliffe, W. ..	2	fair steam	1	5½′	5½′	..	..	..	11′ x 7′	20 ch.	adit	2,457	..	2,457	80,710	83,167	1	3	4	..	..	..	..	..	..
Seddonville State Colliery, Seddonville	Murray, Thomas (mine manager); Bishop, James (gen'l manager)	..	bitum.	1	5′ to 20′	8′	1 in 6	bord and pillar	..	10′ x 8′	39 ch.	.	33,808	..	33,808	2,137	35,945	16	74	90	steam-engine, endless rope	..	..	..	fan	14/11/04
Millerton Colliery, Granity ..	Dunn, William ..	13	.	1	4′ to 40′	12′	variable	ditto	3	4′ x 4′ 4′ x 4′ 6′ x 5′	18′ 18′ 40′	endless rope	253,748	31,427	285,175	1,248,311	1,533,486	97	347	444	gravita'n	12″ 12″ 12″	4′ 4″ 4″	40′ 60′ 40′	1 Hayes exhaust-fan and 1 Schiele exhaust-fan	
Coalbrookdale	Green, John ..	24	.	2	4′ to 18′	4′ to 18′	.	.	2	8′ x 8′ 9′ x 5′	8,146′ 2,640′	adit & endless rope	215,129	33,704	248,833	3,599,355	3,848,188	21	175	196	steam	6″ 10″	3″ 6″	25′ 18′	fan	..
Ironbridge	Sowerby, H. ..	13	.	2	6′ to 20′	6′ to 20′	.	.	..	8′ x 6′	9,048′							18	146	164	steam	12″	5″	20′	fan	..
Westport Cardiff (*not at work*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	227,441	227,441	..	..	..	..	..	..	..	..	..	..	..
Buller Road.																												
White Cliffs	Stone, W. C. ..	9	brown	1	9′	9′	1 in 4	bord and pillar	..	10′ x 7′	250′	adit	634	..	634	1,407	2,041	..	1	1	natural	..	..	..	natural	..
Rocklands	Walker, George ..	4	.	1	15′	8′	1 in 6	ditto	..	8′ x 8′	8 ch. 9 lk.	.	1,456	..	1,456	3,996	5,452	..	2	2	manual	..	..	..	.	..
Waitakere (*not at work*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	868	868	..	..	..	..	..	..	.	..	..
Three-Channel Flat.																												
Flaxbush	Smith, Edward ..	4	..	2	2′ to 4′	2′ to 4′	70 in 85	tunnel	..	5′ x 6′	335′	adit	1,139	..	1,139	1,690	2,829	..	3	3	manual	..	..	..	uprise	7/9/04
Longford (*not at work*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,830	1,830	..	..	..	..	..	..	..	..	..
Alexander (*not at work*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	282	282	..	..	..	..	..	..	..	..	..
Cocksparrow (*not at work*) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	959	959	..	..	..	..	..	..	..	..	..

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Statistics of Workings in Coal-mines, 1904—*continued.*

Name of Mine and Locality.	Name of Manager.	Number of Years worked.	Quality of Coal.	No. of Seams worked.	Thickness of Seams.	Thickness worked.	Dip of Seam.	System of Underground Working.	Number of Shafts.	Dimensions of Shafts.		Output delivered by	Output for 1904.			Approximate Total Output to 31st December, 1903.	Approximate Total Output to 31st December, 1904.	Number of Men ordinarily employed.			Power used for drawing Mineral.	Pumps.			Means of Ventilation.	Date of Inspector's Last Visit.
										Size of Shaft or Adit.	Depth of Shaft or Length of Adit.		Coal.	Slack.	Total.			Above.	Below.	Total.		Strokes.	Size of Barrel.	Height of Column.		
MIDDLE ISLAND—*continued.*																										
Boatman's.													Tons.	Tons.	Tons.	Tons.	Tons.									
Archer's Mine	Archer, F. W. ..	..	bitum.	2	10′ to 12′	10′ to 12′	1 in 25	bord and pillar	..	7′ x 5′	..	adit	2,008	..	2,008	5,080	7,088	..	3	3	manual	..	..	..	upcast (natural current)	..
Coghlan's Mine	Coghlan, J. ..	..	"	1	12′	8′ 6″	1 in 3	tunnelling	..	6′ x 6′	300′	"	110	90	200	1,190	1,390	..	1	1	..	..	..	..	surface	—/9/04
Reefton.																										
Burke's Creek	Cairns, R. ..	3	brown	1	12′	10′	west	main drives & bords	..	7′ x 8′	top level 500′, low level 260′	horse-tr'mway	164	..	164	5,497	5,661	1	2	3	horse	..	..	..	ord'nary return aircourse	6/12/04
Murray Creek	Morris, J. H. ..	25	semi-bitum.	1	..	..	..	open face	..	..	..	..	113	2,225	2,338	14,069	16,407	..	..	..	..	..	..	..	..	..
Phœnix and Venus, Murray Creek	Knight, John ..	25	best household	2	15′	8′	1 in 1	main headings & bords	..	10′ x 8′	250′	adit	1,156	200	1,356	19,004	20,360	4	3	7	..	..	..	..	tunnel	6/12/04
New Inkerman	Sutherland, B. ..	7	semi-bitum.	1	avg. 5′	5′	1 in 1	stoping	1	6′ x 4′	420′	"	1,159	1,241	2,400	3,705	6,105	..	2	2	hand	..	..	..	natural	28/9/04
Progress	Cochrane, Thomas	7	pitch	1	5′	5′	28°	stall and pillars	..	8′ x 5′	700′	level adit	2,397	..	2,397	15,926	18,323	3	4	7	manual	..	..	..	"	7/12/04
Lankey's Creek	Pascoe, Simon ..	1½	fair household	1	7′	6′	west	tunnel	..	..	500′	adit	277	..	277	8,378	8,655	..	2	2	"	..	..	..	"	8/12/04
Reefton	Blackadder, D. ..	2	..	1	12′	9′ to 10′	1 in 3½	..	..	6′ x 4′	800′	"	630	120	750	268	1,018	1	3	4	..	..	..	..	by connection of two different levels	8/12/04
Mines not at work.																										
Barr's Mine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	35	35	..	..	..	..	..	..	..	..	..
Loughnan's	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,713	1,713	..	..	..	..	..	..	..	..	..
Devil's Creek	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	40	40	..	..	..	..	..	..	..	..	..
Golden Treasure	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6,625	6,625	..	..	..	..	..	..	..	..	..
Cochrane's	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	370	370	..	..	..	..	..	..	..	..	..
New Scotia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	62	62	..	..	..	..	..	..	..	..	..
Sir Francis Drake	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,173	2,173	..	..	..	..	..	..	..	..	..
Cumberland	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,070	1,070	..	..	..	..	..	..	..	..	..
Coal Creek	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	67	67	..	..	..	..	..	..	..	..	..

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GREYMOUTH.																										
Blackball	Leitch, Walter ..	14	bitum.	2	17′	15′	1 in 5, 1 in 6	bord and pillar	2	9′ x 6′ 10′ x 7′	1,282′ 600′	adits	69,489	16,039	85,528	624,261	709,789	38	140	178	steam	steam electric 6″	5½″ triple 4″	90′ ram 90′	furnace	26/11/04
Brunner, Brunnerton ..	Coulthard, J. ..	40	"	1	10′ to 12′	10′ to 12′	1 in 4	ditto	..	10′ x 7′	600′	adit horse	35,968	18,971	54,939	2,055,440	2,110,379	49	36	85	horse	..	..	..	natural	..
Tyneside, Brunnerton ..	Armstrong, James	22	"	1	12′	12′	1 in 4	"	1	10′ diameter.	103′	shaft engine	29,329	9,077	38,406	35,893	74,299	21	63	84	steam	10″ 12″ 4″	5½″ 7″ 6″	180′ 116′ 100′	natural (fan build'g)	..
Point Elizabeth State Colliery	Herd, Joseph (mine manager); Bishop, James (general manager)	7½ m'ths	"	1	3′ to 12′	3′ to 12′	1 in 5	"	..	10′ x 7′	11 chains	endless rope (steam-power)	60,255	..	60,255	..	60,255	47	196	243	"	..	..	..	fans	14/12/04
Mines not at work.																										
Coal-pit Heath	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	577,190	577,190	..	..	..	..	..	..	..	..	..
Wallsend	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	205,539	205,539	..	..	..	..	..	..	..	..	..
CANTERBURY.																										
Springfield, Springfield ..	Taylor, Jas. ..	28	brown	1	3′ 3″	all	1 in 6	bord and pillar	2	6′ 6″ x 4′	70′	shaft	1,334	..	1,334	88,301	89,635	1	5	6	steam	direct steam	acting		exhaust steam from pump	19/8/04
Victoria, Springfield ..	Cloudesley, W. J.	4	"	1	4′	"	1 in 6	longwall	1	4′ 6″ x 3′	50′	adit	22	..	22	433	455	..	1	1	horse	..	..	..	natural	19/8/04
Homebush, Glentunnel ..	Campbell, J. C. ..	32	"	2	6′ and 7′	"	1 in 3	bord and pillar	..	6′ x 6′	40 ch.	tunnel	12,188	1,259	13,447	153,914	167,361	4	32	36	horse & steam	..	..	..	"	20/8/04
St. Helen's, White Cliffs ..	Levick, H. ..	28	"	4	8′ 4′ 6″ 3′	"	1 in 3	pillar, slope, and wall	1	4′ 6″ x 3′ 7″	90′ 5 ch.	.. adit	1,398	..	1,398	11,689	13,087	..	3	3	hand	..	..	.	"	20/8/04
Woolshed Creek, Mount Somers	Doak, W. T., Secretary	40	"	1	40′	15′	1 in 9	bord and pillar	..	..	..	"	3,681	..	3,681	41,631	45,312	..	4	4	horse	..	..	..	"	11/11/04
Mount Somers, Mount Somers	Neilson, M. ..	3	"	1	24′	10′	south 1 in 4½	ditto	1	5′ x 4′	25′	"	2,978	673	3,651	9,237	12,888	3	5	8	"	..	..	..	"	11/11/04
Albury, Albury	Willetts, J. M. ..	13	"	1	22′	..	1 in 1	"	1	4′ x 3′ 6″	68′	"	891	..	891	5,386	6,277	2	2	4	"	..	..	..	"	24/8/04
Waihao Forks, Waihao Forks	Preece, J., Owner, Christchurch; Lomas, G., M'ger	12	lignite	1	6′	5′	..	"	..	5′ x 4′	100′	"	355	..	355	266	621	1	2	3	"	..	..	..	"	26/8/04
Waihao, Waihao Forks ..	Grant, W., Owner Harris, A. S., Mgr.	15	"	1	14′	all	..	bord and pillar	..	5′ x 4′	260′	"	141	..	141	1,891	2,032	1	1	2	hand	..	..	..	"	26/8/04
Elephant Hill, Waihao Downs	Mathias, L. ..	36	brown	1	10′	8′	..	ditto	..	6′ x 5′	..	"	112	..	112	295	407	..	1	1	"	..	..	..	"	26/8/04
Private Pits.																										
Dalethorpe, Springfield ..	Campbell, P. ..	10	"	1	6′	all	..	..	..	..	..	..	12	..	12	293	305	..	..	..	..	..	..	..	..	..
Snowdon, Rakaia Gorge ..	Gerard, George ..	19	"	1	14′	8′	1 in 3	narrow	1	4′ x 4′	90′	shaft	50	..	50	1,718	1,768	..	..	..	..	..	..	..	natural	..
Craigieburn, West Coast Road	Manson, D. ..	8	"	1	..	..	..	open	..	..	..	open	26	..	26	213	239	..	..	..	..	..	..	..	..	..
Springburn Lime Company, Staveley	Scott, R. L., Secretary, Ch'stch'ch	4	"	1	5′	all	vertical	levels	..	5′ x 4′	150 yd.	adit	..	..	..	705	705	..	..	..	..	..	..	..	natural	..
Pits not at work.																										
Brockley, Glenroy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	304	304	..	..	..	..	..	..	..	..	..
McKenzie's, Castle Hill ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
Wairiri, South Malvern ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,213	1,213	..	..	..	..	..	..	..	..	..
Acheron, Lake Coleridge ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	503	503	..	..	..	..	..	..	..	..	..
Kowai Pass, Springfield ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	559	559	..	..	..	..	..	..	..	..	..
Glenroy, South Malvern ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	115	115	..	..	..	..	..	..	..	..	..
White Cliffs, South Malvern	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	33,051	33,051	..	..	..	..	..	..	..	..	..
Duke's (Park Gate) Kakahu	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	916	916	..	..	..	..	..	..	..	..	..
Spring Vale, Fairlie Creek ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	200	200	..	..	..	..	..	..	..	..	..
Mount Hutt, Rakaia Gorge ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	155	155	..	..	..	..	..	..	..	..	..
Sheffield, Sheffield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52,284	52,284	..	..	..	..	..	..	..	..	..
Hartley, White Cliffs ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,991	1,991	..	..	..	..	..	..	..	..	..
Campbell's, Springfield ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	110	110	..	..	..	..	..	..	..	..	..

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Statistics of Workings in Coal-mines, 1904—*continued.*

Name of Mine and Locality.	Name of Manager.	Number of Years worked.	Quality of Coal.	No. of Seams worked.	Thickness of Seams.	Thickness worked.	Dip of Seam.	System of Underground Working.	Number of Shafts.	Dimensions of Shafts.		Output delivered by	Output for 1904.			Approximate Total Output to 31st December, 1903.	Approximate Total Output to 31st December, 1904.	Number of Men ordinarily employed.			Power used for drawing Mineral.	Pumps.			Means of Ventilation.	Date of Inspector's Last Visit.
										Size of Shaft or Adit.	Depth of Shaft or Length of Adit.		Coal.	Slack.	Total.			Above.	Below.	Total.		Stroke.	Size of Barrel.	Height of Column.		
MIDDLE ISLAND—*continued.*													Tons.	Tons.	Tons.	Tons.	Tons.									
North Otago.																										
Dalgety, Hakataramea ..	Drysdale, J. ..	23	brown	1	12′	all	..	bord and pillar	..	..	..	adit	60	..	60	2,267	2,327	..	1	1	..	..	..	..	natural	..
Wharekuri, Wharekuri ..	Shanks, A. ..	..	"	1	40′	13′	vertical	levels	..	..	..	"	193	..	193	1,624	1,817	..	2	2	..	..	..	..	"	..
Awakino, Kurow	Orr, George ..	25	"	1	15′	7′	"	stoping	1	6′ x 2′ 6″	53′	"	62	..	62	5,664	5,726	1	2	3	..	..	..	..	"	..
Kurow, Kurow	Cairns, W. B. ..	34	"	1	irregular	..	1 in 2½	narrow	1	4′ x 3′	80′	dip incl.	..	..	..	11,395	11,395	..	..	..	horse	..	..	..	"	..
Otiake, Otiake	Atkinson, P.; D. Reddin, owner	4	"	1	18′	12′	vertical	..	..	6′ x 5′	200′	adit	..	..	..	254	254	..	..	..	..	..	..	..	"	..
St. Andrew's, Papakaio ..	Nimmo, T. ..	26	"	1	6′ 6″	6′	1 in 4	bord and pillar	1	4′ x 2′ 6″	60′	"	1,660	..	1,660	33,370	35,030	1	4	5	horse	..	..	..	furnace	22/10/04
Prince Alfred, Papakaio ..	Willetts, G. H. ..	35	"	1	1′ to 9′	all	1 in 9	ditto	1	5½′ x 6′	51′	"	1,407	..	1,407	47,790	49,197	2	3	5	"	..	..	..	natural	22/10/04
Ngapara, Ngapara	Nimmo, W. ..	26	"	1	18′ to 25′	8′	1 in 17	"	1	4′ x 4′	50′	"	1,028	..	1,028	19,966	20,994	1	2	3	"	..	..	..	"	20/10/04
Kartigi, Kartigi	Twining, C. E. ..	1	pitch	..	..	..	..	..	..	..	..	..	52	..	52	..	52	..	1	1	..	..	..	..	"	..
Shag Point, Shag Point ..	Brooke, E. W. ..	34	"	..	2′ 6″	all	..	bord and pillar	..	..	..	adit	384	69	453	402,773	403,226	2	4	6	hand	..	..	..	"	23/12/04
Allandale, Shag Point ..	Westfield, C. H...	17	"	3	4′ to 6′	"	1 in 4	ditto and longwall	2	10′ x 6′ 8′ x 4′	1,000′ 280′	incline tunnel	14,227	7,377	21,604	210,470	232,074	10	60	70	steam & electricity	duplex Tangye	6″	200′	fan	23/12/04
Pits not at work.																										
Phillips, Kurow	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,985	1,985	..	..	..	..	..	..	..	..	..
Wharekuri (Collins), Kurow..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,424	1,424	..	..	..	..	..	..	..	..	..
Rosebery, Otepopo	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,424	1,424	..	..	..	..	..	..	..	..	..
Earlybank	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	281	281	..	..	..	..	..	..	..	..	..
South Otago.																										
Fernhill, Abbotsford ..	Gray, J. ..	27	brown	1	19′	10′	1 in 10	bord and pillar	1	4½′x 4½′	50′	adit	304	1,583	1,887	139,080	140,967	5	6	11	horse	..	..	..	natural	26/7/04
Freeman's, Abbotsford ..	Hill, R. ..	24	"	2	7′ to 14′	6′ to 7′	1 in 7	ditto	3	6′ x 5′ 7′ x 7′	1,400′ 264′	inclined drive & engine plant	14,869	2,341	17,210	278,848	296,058	8	25	33	steam & horse	12″	5″	130′	furnace	26/7/04
Jubilee, Walton Park ..	Campbell, P. ..	7	"	1	12′ to 18′	8′	1 in 10	"	2	6′ x 5′	4 ch.	adit	14,807	2,380	17,187	51,988	69,175	3	25	28	ditto	..	..	..	natural	27/7/04
Saddle Hill (No. 1), Saddle Hill	Ogilvie, W. W.	32	"	1	20′	8′ to 16′	1 in 10	"	4	5′ 10″ x 4′ 6″	264′	inclined drive	3,630	5,327	8,957	133,155	142,112	3	13	16	"	..	..	..	"	27/7/04
Saddle Hill (No. 2), Saddle Hill	Christie, W. H. L.	3	"	..	..	..	..	1 in 14	"	..	..	..	adit	2,358	9,969	12,327	10,119	22,446	3	17	20	"	..	..	..	furnace	27/7/04
Burnweil, Saddle Hill ..	Harris, A. ..	13	"	1	20′	10′	variable	"	1	5′ x 3′	30′	incline	952	1,833	2,785	24,055	26,840	2	4	6	horse	..	..	..	natural	28/7/04
Glenochiel, Saddle Hill ..	Bryce, D. ..	23	"	1	16′	7′ to 9′	1 in 9	"	3	6′ x 4′	4 ch.	tunnel	..	1,052	1,052	28,114	29,166	2	2	4	"	..	..	..	"	28/7/04
Brighton, Brighton ..	McColl, D. L. ..	16	"	1	6′	5′ 6″	variable	"	..	..	..	"	225	..	225	1,559	1,784	1	1	2	"	..	..	..	"	3/7/04
Lauriston, Brighton ..	Walker, J. ..	18	"	1	6′	5′ 6″	"	"	1	..	48′	"	261	63	324	5,914	6,238	1	1	2	"	..	..	..	"	3/7/04
Drummuir, Brighton ..	Sneddon, James	1	"	1	..	..	..	"	..	..	..	adit	26	..	26	..	26	..	1	1	"	..	..	..	"	3/7/04

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Mosgiel, Mosgiel	Orr, H. ..	20	brown	1	8′	7′	1 in 10	bord and pillar	2	4′ x 4′	14 ch.	tunnel	742	674	1,416	94,597	96,013	2	3	5	steam	Dean ..	..	70′	natural	..
Ferndale, Taieri Beach ..	Fairbairn, R. ..	21	"	1	10′	8′	..	"	..	10′ x 8′	100′	"	47	..	47	515	562	..	..	..	hand	.. ..	..	..	"	..
Bruce, Milton	Young, A. ..	37	"	1	15′	9′	1 in 8	"	..	..	..	adit	..	..	..	24,314	24,314	..	..	..	"	.. ..	..	..	"	3/11/04
Akatore, Milton	Reid, James ..	10	"	1	14′	all	..	"	..	..	..	"	142	..	142	306	448	..	1	1	"	.. ..	..	..	"	3/11/04
Fortification, Milton ..	Brown, J. ..	7	"	1	7′ to 14′	5′ to 7′ 6″	1 in 12		2	7′ x 6′ 6′ x 6′	4½ ch. 11½ ch.	incline tunnel	4,109	1,085	5,194	33,756	38,950	2	6	8	steam	6″	4″	30′	exhaust steam from pump	3/11/04
Glenledi, Milton	McGilp, N. ..	4	"	1	22′	all	1 in 8	open and bord and pillar	..	..	..	open and adit	333	..	333	2,420	2,753	..	1	1	hand	.. ..	..	..	natural	3/11/04
Adam's Flat, Adam's Flat ..	Reid, J. ..	22	lignite	1	14′	10′	..	open	..	..	..	open	12	..	12	2,241	2,253	..	..	..	hand	.. ..	..	..	..	..
Wallsend, Lovell's Flat ..	Hewitson, R. ..	34	"	1	20′	all	..	"	..	..	..	"	145	..	145	11,136	11,281	2	..	2	"	.. ..	..	..	..	..
Lovell's Flat, Lovell's Flat ..	Carruthers, James	10	brown	1	5′ to 10′	5′ to 7′	1 in 4	bord and pillar	1 1	1′ x 5′ 5 x 4	470′ 360′	shaft	15,172	4,242	19,414	73,571	92,985	10	32	42	steam	16″	6″	480′	furnace	2/11/04
Benhar, Stirling	McSkimming, P.	41	lignite	3	30′ in aggregate	12′	..	ditto	..	4′ x 4′	..	incline	2,759	863	3,622	104,775	108,397	1	5	6	steam	steam-driven	..	..	natural	2/11/04
Mount Wallace, Stirling ..	Walls, James ..	10	"	1	14′	8′ to 10′	..	"	..	..	..	adit	456	47	503	4,556	5,059	..	2	2	horse	.. ..	..	..	"	13/3/04
Taratu, Taratu	Shore, T. ..	3	brown	1	20′	8′ to 14′	1 in 10	"	..	6′ x 6′	5 ch.	"	14,078	6,215	20,293	17,891	38,184	7	33	40	"	.. ..	..	..	"	28/10/04
Longridge, Kaitangata ..	Mackie, N. ..	3	"	1	4′	all	..	"	..	..	..	..	..	..	..	133	133	..	..	..	..	.. ..	..	..	"	..
Kaitangata and Castle Hill, Kaltangata	Jordan, R. S. (O. G. Lockhart, sec.)	28 11	" "	3 4	50′ in aggregate 50′ in aggregate	"	1 in 1½ to 1 in 4 1 in 1½ to 1 in 4	" "	..	9′ x 7′ 6′ diam. 11′ x 6′ 6″ 9′ diam.	51 ch. 360′ 45 ch. 526′	inclined "	86345	32,749	119,094	1,763,889	1,882,983	69	373	442	steam & compressed air ditto	2′ 6″ three-throw pump	6″ 6″	280′ 500′	fan furnace	14/12/04 21/7/04
Wangawa, Kaitangata ..	Smith, J. ..	24	brown	1	10′ 6′	8′	1 in 6	bord and pillar	..	..	..	adit	70	26	96	1,526	1,622	..	1	1	hand	.. ..	..	..	natural	..
Mainhelm, Waipahi ..	Lischner, F. ..	19	lignite	1	15′	all	..	open	..	..	..	open	3,140	..	3,140	36,132	39,272	3	..	3	horse	cent steam-	rifu driv	gal en	..	..
Private Pits.																										
Paskell's, Adam's Flat ..	Paskell, James ..	40	"	1	8′		1 in 6	"	..	..	..	"	6	..	6	470	476	..	..	..	"	.. ..	..	..	..	..
Tuakitoto, Lovell's Flat ..	Dunlop, A. ..	14	brown	1	20′	8′	..	bord and pillar	..	..	..	incline	14	..	14	3,124	3,138	..	..	..	"	.. ..	..	..	natural	..
Lakeside, Kaitangata ..	McGilvray, W. ..	4	"	1	..	..	..	..	..	..	..	..	4	..	4	827	831	..	..	..	"	.. ..	..	..	..	..
Pits not at work.																										
Walton Park, Walton Park ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	572,593	572,593	..	..	..	..	.. ..	..	..	..	..
Riccarton, Riccarton ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3,006	3,006	..	..	..	..	.. ..	..	..	..	..
Strip-and-at-it, Milton ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	700	700	..	..	..	..	.. ..	..	..	..	..
Paratu, Kaitangata ..	H. H. Fraser ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	220	220	..	..	..	..	.. ..	..	..	..	..
Record, Kaitangata ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	414	414	..	..	..	..	.. ..	..	..	..	..
Early Rise, Milton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15	15	..	..	..	..	.. ..	..	..	..	..
Chain Hills, Abbotsford ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	842	842	..	..	..	..	.. ..	..	..	..	..
Salisbury, Mosgiel	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4,433	4,433	..	..	..	..	.. ..	..	..	..	..
Bruce No. 2, Milton ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	23,322	23,322	..	..	..	..	.. ..	..	..	..	..
Rigfoot, Stirling	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5,163	5,163	..	..	..	..	.. ..	..	..	..	..
Morrison's, Stirling ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	646	646	..	..	..	..	.. ..	..	..	..	..
Pomahaka, Pomahaka ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20	20	..	..	..	..	.. ..	..	..	..	..
Castle Hill No. 1, Kaitangata	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9,314	9,314	..	..	..	..	.. ..	..	..	..	..
Crofthead, Kaitangata ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6,713	6,713	..	..	..	..	.. ..	..	..	..	..
Langridge, Kaitangata ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	693	693	..	..	..	..	.. ..	..	..	..	..
Lesmahagow, Kaitangata ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,511	1,511	..	..	..	..	.. ..	..	..	..	..
Cowpan's, Owaka	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	95	95	..	..	..	..	.. ..	..	..	..	..
Shennan's, Waipahi ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	45	45	..	..	..	..	.. ..	..	..	..	..
Early Bank, Milton ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	320	320	..	..	..	..	.. ..	..	..	..	..

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Statistics of Workings in Coal-mines, 1904—*continued.*

Name of Mine and Locality.	Name of Manager.	Number of Years worked.	Quality of Coal.	No. of Seams worked.	Thickness of Seams.	Thickness worked.	Dip of Seam.	System of Underground Working.	Dimensions of Shafts. Number of Shafts.	Size of Shaft or Adit.	Depth of Shaft or Length of Adit.	Output delivered by	Output for 1904. Coal.	Slack.	Total.	Approximate Total to 31st December, 1903.	Approximate Total to 31st December, 1904.	Number of Men ordinarily employed. Above ground.	Below ground.	Total.	Power used for [illegible]	Pumps. Horse	Steam. No. of Horse-power	Height of Column	Means of Lighting	Date [illegible]
MIDDLE ISLAND—*continued.*																										
CENTRAL OTAGO.													Tons.	Tons.	Tons	Tons	Tons									
Progress, Roxburgh ..	Bailey, J. ..	7	lignite	1	..	all	..	open	..	..	..	open	..	..	..	516	516				horse					10/11/04
Coal Creek (leasehold)																										
Coal Creek (freehold), Coal Creek Flat	Barber, J.	34 / 3	"	1	80' / ..	" / ..	1 in 6	bord and pillar	1	6' x 7'	150'	" / adit	8,040	..	8,040	31,441	34,400	2	4	6	" / hand	..	..	..	natural	[illegible]
McPherson's, Coal Creek Flat	McPherson, A. ..	34	"	1	80'	30' to 40'	1 in 6	open	..	..	..	open	3,550	..	3,550	31,650	35,200	6		6	horse					1/10/04
Perseverance, Coal Creek Flat	Craig, J. ..	17	"	1	99'	70'	1 in 4	bord and pillar	..	6' x 7'	..	adit	5,550		5,550	24,700	29,300	2	7	9	Pelton wheel & winch	hydraulic jet pump			natural	10/6/04
Alexandra, Alexandra	Mathias Bros., Hunter, and	24	brown	1	14'	7'	1 in 7	ditto	2	5' x 2' 6" / 6' x 4'	60'	"	2,213	..	2,213	38,664	40,877	1	11	12	steam	snow pump			furnace and natural	1/10/04
Perseverance, Alexandra	Bowler, owners;	6	"	1	14'	7'	1 in 7	"	..	..	..	"	2,198	..	2,198	15,759	17,957	1	6	7	tangye	pump		Dittto		17/10/04
Undaunted, Alexandra	Hunter, A., m'gr.	6	"	1	7'	6'	1 in 7	"	1	5' x 2' 6"	70'	shaft	1,52	..	1,52	3,000	3,150	1	2	3	horse	water-box hat			natural	11/1/04
McQueenville (old mine), Alexandra	Hodson, J. ..	17	"	1	14'	7'	1 in 7	"	1	2 4' 9" x 3'	62'	adit	8,274		8,274	43,111	46,000	1	9	10	steam	Dean	pump			13/11/04
McQueenville (new mine), Alexandra	Hodson, J. ..	1	"	1	undetermined	..	1 in 7	..	..	6' x 5'	300'	incline drive		..				4	6	9	water box				fan	30/9/04
Alexandra Coal Company, Alexandra	Pollock, James ..	6	"	1	28'	8'	..	bord and pillar	1	6' x 4'	60'	shaft	11,060	.	11,060	30,740	50,110	5	14	19		three throw pump &		ram snow pump	steam jet	30/9/04
Cambrian's, Cambrian's ..	Dungey, C. ..	20	lignite	1	9'	all	..	open	..	..	..	open	28	..	28	14,351	14,379	1	..	1	horse	..	..	..	..	18/3/04
Jones', Cambrian's ..	Jones, Robert ..	1	"	1	..	..	..	"	..	..	..	"	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Welshman's Gully, Cambrian's	McGuckin, J. & R.	43	"	1	30'	all	..	open	..	..	..	"	900	..	900	30,900	31,800	2	..	2	horse	..	..	..	..	14/7/04
Blackstone Hill, Blackstone Hill	Armitage, J. ..	38	"	1	unknown	16'	..	"	..	..	..	"	353	..	353	3,772	4,125	1	..	1	"	..	..	..	..	20/9/04
St. Bathan's, St. Bathan's ..	Enwright, J. ..	7	"	1	17'	all	..	"	..	..	..	"	300	..	300	2,700	3,000	2	..	2	"	..	..	..	..	24/5/04
Beck's Idaburn, Idaburn	Beck, Wm., Mrs.	18	"	1	35'	"	..	"	..	..	..	"	2,608	..	2,608	16,318	18,926	3	..	3	"	..	..	..	..	24/5/04
McLean's, Idaburn	M. Beck (o)	..	"	1	15'	"	..	"	..	..	..	"	..	..	..	1,127	1,127	..	..	..	..	..	..	..	..	21/3/04
Idaburn, Idaburn ..	White, J. ..	34	"	1	20'	"	..	"	..	..	..	"	995	..	995	34,591	35,586	2	..	2	"	..	..	..	..	24/5/04
Border, Rough Ridge ..	Turnbull, G. ..	34	"	1	12'	"	..	"	..	..	..	"	89	..	89	7,134	7,223	1	..	1	horse	two Douglas water-driven			pumps	21/8/04
Gimmerburn, Gimmerburn ..	Docherty, C. ..	39	"	1	12'	"	..	"	..	..	..	"	48	..	48	2,701	2,749	..	..	..	hand	..	..	..	..	..
Commercial, Kyeburn Diggings	Archer, C. ..	25	brown	1	10'	8'	vertical	stoping	..	..	..	incline	260	..	260	14,991	15,251	1	2	3	water-w	heel	..	..	natural	25/5/04
Donaldson's Horse Flat, Macrae's	Donaldson, W. G.	1	"	1	6'	5'	..	bord and pillar	..	5' x 6'	60'	dip	160	..	160	..	160	1	2	3	horse	water-	box	..	"	16/6/04
Vincent, Clyde	Turner, G. F., Clyde Collieries Company (owners), C. S. Reeves, sec., Dunedin	..	"	2	40'	14'	1 in 2	levels	..	..	..	dip	1,088	..	1,088	18,839	19,927	1	3	4	steam	..	..	..	"	6/10/04
Dairy Creek, Clyde		32	"	2	40'	14'	1 in 2	"	..	..	..	incline ditto	3,891	..	3,891	12,631	16,022	2	6	8	"	steam-driven	..	..	"	6/10/04

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CENTRAL OTAGO—*continued.*																									
Shepherd's Flat, Clyde ..	Loch Lomond G.D. Co., owners; J. Goodger, Sec.	2	brown	1	6	all	..	bord and pillar	..	5′ x 4′	..	incline tunnel	486	..	486	6	492	1	2	3	horse	..	..	..	natural	6/10/04
Cardrona, Cardrona ..	McDougall, R. ..	20	"	1	30′	"	vertical	open	..	..	..	open	2,085	..	2,085	14,953	17,038	7	..	7	"	..	..	..	..	..
Gibbston, Gibbston ..	Duncan, J. ..	18	"	1	30′	all	1 in 2	bord and pillar	..	..	..	adit	1,647	105	1,752	10,118	11,870	1	6	7	hand & steam	..	..	..	natural	30/11/04
Cairnmuir, Bannockburn ..	Gibson, J. ..	..	"	1	12′	8′	semi-vertical	level & headi ng	2	..	..	shaft	555	..	555	1,475	2,030	2	4	6	steam	..	..	..	"	10/10/04
Kawarau, Bannockburn	Cromwell and Bannockburn Collieries Co., A. S. Gillanders, Mine Man. T. K. Harty, Managing Director	27	"	1	10′	6′	1 in 4	bord and pillar	1	6′ x 6′	34′	incline	3,433	..	3,433	37,055	40,488	2	11	13	"	steam driven	..	..	"	11/10/04
Excelsior, Bannockburn		12	"	1	6′	5′	1 in 4	ditto	1	6′ x 5½′	..	"	6,841	..	6,841	16,526	23,367	4	16	20	"	ditto	..	..	"	11/10/04
Bannockburn, Bannockburn		15	"	1	6′	5′	1 in 4	"	1	6′ x 4′	20′	adit	789	..	789	13,637	14,426	2	3	5	"	..	..	..	"	11/10/04
Nevis, Nevis	Scott, C. ..	11	"	1	20′	all	vertical	open	..	..	..	open	440	..	440	4,267	4,707	2	..	2	hand	..	..	..	..	2/12/04
Ryders, Nevis	Scott, C. ..	4	"	1	45	"	"	"	..	..	..	"	271	..	271	2,766	3,037	1	..	1	"	..	..	..	..	2/12/04
Ritchie's, Nevis	Ritchie, Jas. ..	2	"	1	..	..	..	"	..	..	..	"	..	..	..	20	20	..	..	..	..	..	..	..	..	3/12/04
Ritchie's, Nevis	Ritchie, R. ..	2	"	1	..	..	semi-vertical	"	..	..	..	"	512	..	512	138	650	2	..	2	..	..	..	..	..	3/12/04
Graham's Nevis	Graham, S. J. ..	1	"	1	..	all	..	"	..	..	..	..	140	..	140	..	140	1	..	1	hand	..	..	..	..	3/12/04
Private Pits.																									
Kyeburn, Kyeburn Diggings	McCready and Coombs	21	"	1	..	..	vertical	levels	..	..	..	adit	13	18	31	15,399	15,430	..	..	..	"	..	..	..	natural	..
Price's, Blackstone Hill ..	Price, G. ..	7	lignite	1	12′	all	..	open	..	..	..	open	35	..	35	112	147	..	..	..	"	..	..	..	..	..
Angel's, Bannockburn ..	Angel, C. F. ..	2	brown	1	..	"	..	"	..	..	..	"	4	..	4	4	8	..	..	..	..	..	..	..	..	..
Pits not at work.																									
Black Diamond, Roxburgh ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	232	232	..	..	..	..	..	..	..	..	..
Simpson Theyers, Alexandra	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,636	1,636	..	..	..	..	..	..	..	..	..
Cromwell, Cromwell ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3,019	3,019	..	..	..	..	..	..	..	..	..
Cooper's, Cromwell ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	385	385	..	..	..	..	..	..	..	..	..
Upper Nevis, Nevis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	65	65	..	..	..	..	..	..	..	..	..
Williamson's, Nevis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	95	95	..	..	..	..	..	..	..	..	..
Padgett's, Blackstone Hill ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	46	46	..	..	..	..	..	..	..	..	..
Waikerikeri, Clyde ..	Dunstan Coal Co. (Smart, J., sec.)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20,322	20,322	..	..	..	..	..	..	..	..	..
Drummey's, Alexandra ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	179	179	..	..	..	..	..	..	..	..	..
Enterprise, Alexandra ..	(Rivers) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	703	703	..	..	..	..	..	..	..	..	..
Fennessy's, Idaburn ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	70	70	..	..	..	..	..	..	..	..	..
Cooper & Gibson's, Bannock'rn	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5,395	5,395	..	..	..	..	..	..	..	..	..
Gibbston, Gibbston ..	(Cowan's) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19,464	19,464	..	..	..	..	..	..	..	..	..
Doolan's Creek, Gibston ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	31	31	..	..	..	..	..	..	..	..	..
Harrex and Owen's, Cambrian's	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	60	60	..	..	..	..	..	..	..	..	..
Blackman's Gully, Clyde ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	144	144	..	..	..	..	..	..	..	..	..
Nulli Secundus, Bannockburn	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	632	632	..	..	..	..	..	..	..	..	..
Blackman's, Alexandra ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	89	89	..	..	..	..	..	..	..	..	..
Gibson's, Bannockburn ..	Gibson, J. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	220	220	..	..	..	..	..	..	..	..	..
Watherston's, Nevis ..	Watherston, A. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	5	..	..	..	..	..	..	..	..	..
SOUTHLAND.																									
Pukerau, Pukerau	O'Hagan, C. ..	24	lignite	1	16′	8′ to 10′	1 in 10	bord and pillar	1	8′ x 8′	11 ch.	adit	934	..	934	30,601	31,535	1	2	3	horse	..	..	..	natural	2/5/04
Nelson's, Pukerau	Nelson, J. H. ..	15	"	1	16′	10′	..	ditto	..	..	..	"	250	..	250	2,965	3,215	..	1	1	hand	..	..	..	"	2/5/04

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STATISTICS of WORKINGS in COAL-MINES, 1904—*continued.*

Name of Mine and Locality.	Name of Manager.	Number of Years worked.	Quality of Coal.	No. of Seams worked.	Thickness of Seams.	Thickness worked.	Dip of Seam.	System of Underground Working.	Number of Shafts.	Dimensions of Shafts.		Output delivered by	Output for 1904.			Approximate Total Output to 31st December, 1903.	Approximate Total Output to 31st December, 1904.	Number of Men ordinarily employed.			Power used for drawing Mineral.	Pumps.			Means of Ventilation.	Date of Inspector's Last Visit.
										Size of Shaft or Adit.	Depth of Shaft or Length of Adit.		Coal.	Slack.	Total.			Above.	Below.	Total.		Stroke.	Size of Barrel.	Height of Column.		
													Tons.	Tons.	Tons.	Tons.	Tons.									
MIDDLE ISLAND—*continued.*																										
SOUTHLAND—*continued.*																										
Whiterigg, Gore	Paterson, S. B. ..	22	lignite	1	18′	12′	1 in 20	bord and pillar	1	6 x 5′	2 ch.	incline tunnel	4,730	..	4,730	15,437	20,167	2		6	horse	Tangye	..	..	natural	29/6/04
Heffernan's, Gore	Jones, E. ..	26	"	1	11′	8′	..	levels & headings	1	6′ x 5′	..	ditto	1,972	..	1,972	7,547	9,519	1	4	5	horse	hand-pump	..	..	"	20/5/04 & 6/9/04
Rosedale, Gore	Reinke, A. ..	18	"	1	7′	all	..	open	..	..	..	open	486	..	486	2,593	3,079	2	..	2	"	..	..	..	"	20/5/04
Green's, Gore	Smyth, J. and J.	16	"	1	22′	17′	1 in 20	bord and pillar	1	10′ x 8′	5 ch.	incline tunnel	10,268	..	10,268	37,277	47,545	2	7	9	"	Tangye	..	..	"	21/6/04
River View, Gore	Nicol, L. D. ..	13	"	1	..	..	..	open	..	..	..	open	357	..	357	1,001	1,358	1	..	1	hand	..	..	..	..	..
Waikaka (McDonald's), East Gore	McDonald, G. H.	3	"	1	17′	all	..	"	..	..	..	"	102	..	102	323	425	1	..	1	"	hand-pump	..	..	..	6/9/04
Boornwell, Chatton ..	Hoffman, J. ..	5	"	1	16′	12′	1 in 10	levels & headings	..	20′ x 12′	100′	adit	3,100	..	3,100	..	3,100	2	4	6	horse	ditto	..	..	natural	7/9/04
Perkins's, East Chatton ..	Perkins, A. ..	2	"	1	30′	20′	1 in 5	open	..	..	..	open	1,194	..	1,194	1,333	2,527	2	2	4	hand	..	..	..	..	20/12/04
Pacey's (leasehold), East Chatton	Pacey, W. R.	28	"	1	30′	14′	1 in 6	"	..	..	..	"	1,590	..	1,590	13,805	15,395	2	..	2	horse	centrifugal	..	..	..	20/1/04
Pacey's (freehold), East Chatton		1	"	1	17′	all	..	"	..	..	..	"						4	..	4	steam	hand-pump	..	..	..	20/12/04
Thorndale, Waikaka Valley ..	Ritchie & Co., T.	5	"	1	10′	"	..	"	..	..	..	"	861	..	861	3,168	4,029	5	..	5	horse	..	..	..	..	25/2/04
Johnstone's, Springfield, Waikaka Valley	McIntyre, J. P. ..	11	"	1	17′	"	..	"	..	..	..	"	2,396	..	2,396	6,343	8,739	4	4	8	"	..	..	..	..	7/9/04
Willow Bank, Waikaka Valley	Reid, Robert ..	8	"	1	15′	"	..	"	..	..	..	"	4,422	..	4,422	9,003	13,425	6	..	6	"	two Douglas pumps	..	..	..	6/9/04
Glenlee, Wendon Valley ..	McGill, D. T. ..	11	"	1	14′	8′	..	levels & headings	..	10′ x 8′	2 ch.	adit	1,819	..	1,819	4,450	6,269	1	2	3	"	..	..	..	natural	6/9/04
McDonald's, Wendon Valley	Edge, A. A. ..	5	"	1	16′	12′	..	ditto	..	12′ x 12′	..	"	2,042	..	2,042	4,929	6,971	1	3	4	"	..	..	..	"	6/9/04
Wendon, Wendon Valley ..	Edge, A. A. ..	26	"	1	16′	all	1 in 4	"	..	10′ x 12′	200′	incline tunnel	600	..	600	6,236	6,836	1	3	4	steam	water-box	..	..	"	26/2/04
Bushbridge's, Wendon Valley	Bushbridge, P. ..	4	"	1	..	..	..	open	..	..	..	open	118	..	118	107	225	1	..	1	horse	..	..	..	..	26/2/04
Radford's, Wendon ..	Radford, E. & P.	14	"	1	20′	all	vertical	stoping	..	..	..	incline tunnel	261	..	261	4,268	4,529	..	2	2	"	..	..	..	natural	..
Waikaia Collieries Company, Waikaia	Ross, Robert ..	5	"	1	20′	10′	"	levels & headings	..	6′ x 8′	60′	ditto	307	..	307	1,242	1,549	1	2	3	steam	steam-driven	..	..	"	27/6/04
Nelson's, Landslip, Waikaia	Nelson, Jno. (owner); Duncan, Jas. (mgr.)	1	"	1	10′	all	1 in 8	ditto	..	6′ x 4′	..	adit	257	..	257	..	257	1	4	5	hand	..	..	..	"	26/10/04
McIver's, Landslip, Waikaia	McIver, R. ..	13	"	1	15′	12′	..	"	..	..	..	incline tunnel	2,401	..	2,401	2,890	5,291	1	4	5	horse	..	..	..	"	26/10/04
Muddy Terrace, Landslip, Waikaia	Goldie, T. F. ..	2	lignite & shale	1	10′	all	..	open	..	..	..	open	1,710	..	1,710	356	2,066	3	..	3	"	..	..	..	"	26/10/04

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Number One, Landslip, Waikaia	McKinnon, A. ..	5	lignite	1	12′	7′	..	bord and pillar	..	6′ x 5′	..	adit	1,268	..	1,268	1,293	2,561	1	3	4	hand	..	..	..	natural	26/10/04
Ross's, Landslip, Waikaia ..	Ross, Robert ..	1	"	1	10′	7′	..	ditto	..	6′ x 5′	..	"	78	..	78	..	78	1	1	2	"	..	..	..	"	26/10/04
Argyle, Landslip, Waikaia ..	Baxter, J. and T.	13	"	1	10′	10′	..	open	..	..	..	open	201	..	201	2,324	2,525	1	..	1	"	..	..	..	..	25/10/04
Beer's, Mossburn	Beer, Mrs. T. ..	..	..	1	..	..	..	..	..	..	..	..	14	..	14	17	31	..	..	..	"	..	..	..	..	..
Pyramids, Mandeville ..	Hollows, W. & J.	12	brown	1	18′	9½	1 in 2	bord and pillar	..	6′ x 5′	..	adit	747	..	747	1,656	2,403	..	3	3	"	..	..	..	natural	..
Waimumu, Mataura ..	Sleeman, C. P. ..	8	lignite	1	17′	all	..	open	..	..	..	open	9,680	..	9,680	67,142	76,822	7	..	7	horse	..	..	..	..	25/6/04
Bogside, Mataura	Mutch and Hurst	8	"	1	16′	"	..	"	..	..	..	"	107	..	107	3,091	3,198	2	..	2	"	Douglas pump water-driven			..	25/6/04
Mataura Lignite, Mataura ..	Coster, W. ..	28	"	1	16′	"	..	"	..	..	..	"	6,170	..	6,170	39,438	45,608	6	..	6	"	centrifugal steam-driven		..	..	25/6/04
Waimumu, Waimumu ..	Williams, W. J...	5	"	3	6′ 10′ 6″ 5′	"	..	"	..	..	..	"	3,504	..	3,504	7,466	10,970	7	..	7	"	..	..	..	..	26/6/04
Ota Creek, Wyndham ..	Shields, Wm. ..	24	"	1	6′	"	..	"	..	..	..	"	660	..	660	11,744	12,404	2	..	2	"	..	..	..	..	..
Robin Hood, Pine Bush ..	Couser, Wm. ..	23	"	1	15′	"	..	"	..	..	..	"	274	..	274	1,858	2,132	1	..	1	"	..	..	..	..	..
Graham's, Fairfax	Graham, P. S. ..	26	"	1	5′ 6″	"	1 in 20	bord and pillar	..	..	6 ch.	adit	470	..	470	14,326	14,796	..	2	2	hand	..	..	..	natural	..
Isla Bank, Fairfax	Slattery, M. ..	24	"	1	5′	"	..	open	..	..	..	open	384	..	384	6,273	6,657	..	..	..	"	..	..	..	..	..
Ardlowie, Fairfax	George, James ..	2	"	1	..	..	..	"	..	..	..	"	180	..	180	..	180	1	..	1	"	..	..	..	..	..
Nightcaps, Nightcaps ..	Lloyd, J. ..	23	brown	3	36′ in aggregate	24′ in aggregate	variable to 1 in 7	bord and pillar	3	4′ x 4′ 4′ x 4′ 6″ 5′ x 5′	32 ch.	adit	43,118	..	43,118	380,845	423,963	26	53	79	steam and horse	..	..	..	fan	19/10/04
Hit or Miss, Nightcaps ..	Tinker, W. ..	4	"	1	..	..	..	ditto	..	..	..	..	524	..	524	841	1,365	..	2	2	horse	..	..	..	natural	20/10/04
H.B., Nightcaps	Lamont, A. ..	6	"	1	6′ 6″	all	..	open	..	..	..	open	84	..	84	3,972	4,056	1	..	1	hand	..	..	..	..	20/10/04
The Willow, Nightcaps ..	Brighton, G. ..	5	"	1	14′	"	..	"	..	..	..	"	466	..	466	605	1,071	2	..	2	"	..	..	..	..	..
Kent, Nightcaps	Quested, J. R. ..	6	"	1	4′	"	..	"	..	..	..	"	42	..	42	649	691	1	..	1	"	..	..	..	..	..
Morley, Nightcaps	Spence, G. R ..	1	"	1	..	"	..	"	..	..	..	"	1,302	..	1,302	..	1,302	2	..	2	..	..	..	..	..	20/10/04
McBride's, Nightcaps ..	Reed, W. ..	4	"	1	10′	"	..	"	..	..	..	"	40	..	40	4,058	4,098	1	..	1	hand	..	..	..	..	..
Bush Siding, Seaward Bush	Robson, R. W. ..	2	..	1	..	..	..	"	..	..	..	"	778	..	778	60	838	2	..	2	"	..	..	..	..	..
Gillies and Raymond, Clifton	Gillies, T. ..	3	..	..	..	..	..	"	..	..	..	"	86	..	86	82	168	1	..	1	..	..	..	..	..	..
Pits worked for Private Use.																										
Waverley Park, Pukerau ..	Milne, Jas. ..	3	lignite	1	7′	all	..	open	..	..	..	open	..	..	..	24	24	..	..	..	..	..	..	..	..	..
Mason's, Pukerau	Mason, A. M. W.	3	"	1	7′	"	..	"	..	..	..	"	24	..	24	34	58	..	..	..	..	..	..	..	..	..
R. Smith's, East Gore ..	Smith, R. ..	3	"	1	14′	"	..	"	..	..	..	"	12	..	12	32	44	..	..	..	..	..	..	..	..	..
Smith's, East Gore ..	Smith, H. ..	3	"	1	7′	"	..	"	..	..	..	"	12	..	12	35	47	..	..	..	..	..	..	..	..	..
Leitze's, Gore	Leitze, M. ..	25	"	1	4′ to 7′	"	..	"	..	..	..	"	34	..	34	1,472	1,506	..	..	..	..	..	..	..	..	..
Cross's, Otama	Cross Bros. ..	6	"	1	4′	"	..	"	..	..	..	"	10	..	10	136	146	..	..	..	..	..	..	..	..	..
Ford's, Chatton	Ford, P. ..	24	"	1	..	"	..	"	..	..	..	"	52	..	52	470	522	..	..	..	..	..	..	..	..	..
Perkins's, Wendon Valley ..	Perkins, G. A. ..	3	"	1	7′	"	..	"	..	..	..	"	6	..	6	27	33	..	..	..	..	..	..	..	..	..
McGilvray's, Mataura ..	McGilvray, J. ..	14	"	1	4′	"	..	"	..	..	..	"	..	..	..	353	353	..	..	..	..	..	..	..	..	..
McKenzie's, Blackmount ..	McKenzie, R. ..	..	..	..	..	..	..	..	..	..	..	..	236	..	236	2,665	2,901	1	..	1	..	..	..	..	..	..
Wyndham, Wyndham ..	Irvine, D. ..	9	lignite	1	..	all	..	open	..	..	..	open	16	..	16	299	315	..	..	..	..	..	..	..	..	..
Marshall's, Edendale ..	Marshall, H. ..	13	"	1	5′	"	..	"	..	..	..	"	50	..	50	625	675	..	..	..	..	..	..	..	..	..
Pits not at work.																										
Knapdale, Chatton ..	..	18	"	1	26	15′	semi-vertical	wide headings	..	..	..	adit	..	..	..	6,480	6,480	..	..	..	..	..	..	..	..	..
Waimea, Longridge Village, Waimea	..	13	"	1	3′	all	..	open	..	..	..		..	..	..	8,245	8,245	..	..	..	..	..	..	..	..	..
Lambert's, Edendale ..	..	1	"	1	12′	"	..	"	..	..	..	"	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Naylons, Fairlax	..	1	..	1	..	..	..	"	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

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Statistics of Workings in Coal-mines, 1904—*continued.*

MIDDLE ISLAND—*continued.*

Name of Mine and Locality.	Name of Manager.	Number of Years worked.	Quality of Coal.	No. of Seams worked.	Thickness of Seams.	Thickness worked.	Dip of Seam.	System of Underground Working.	Number of Shafts.	Dimensions of Shafts. Size of Shaft or Adit.	Dimensions of Shafts. Depth of Shaft or Length of Adit.	Output delivered by	Output for 1904. Coal.	Output for 1904. Slack.	Output for 1904. Total.	Approximate Total Output to 31st December, 1903.	Approximate Total Output to 31st December, 1904.	Number of Men ordinarily employed. Above.	Below.	Total.	Power used for drawing Mineral.	Pumps. Stroke.	Size of Barrel.	Height of Column.	Means of Ventilation.	Date of Inspector's Last Visit.
SOUTHLAND—*continued.*													Tons.	Tons.	Tons.	Tons.	Tons.									
***Pits not at work*—continued.**																										
Orepuki, Orepuki ..	..	20	brown	..	12′ to 22′	6′	..	sectional	..	10′ x 6′ 6″	..	adit	..	..	..	24,471	24,471	..	..	..	..	..	..	..	..	..
	..	2	oil-shale	..	4′	4′	..	..	..	..	..	..	..	..	66	14,422	14,422	..	..	..	..	..	..	..	..	..
Waikoikoi, Pukerau ..	..	16	lignite	1	6′	all	..	open	..	..	..	open	..	..	..	330	330	..	..	..	..	..	..	..	..	..
Vial and Gillespie's ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	817	817	..	..	..	..	..	..	..	..	..
Goldie's, Landslip	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	474	474	..	..	..	..	..	..	..	..	..
Glover's, Pukerau	Glover, A. ..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	84	84	..	..	..	..	..	..	..	..	..
Waikoikoi, Pukerau ..	Scott & Ferguson	2	..	..	..	..	..	..	..	..	..	..	..	..	..	110	110	..	..	..	..	..	..	..	..	..
McBride's, No. 11, Nightcaps	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	72	72	..	..	..	..	..	..	..	..	..
Nichol's, Gore	Nichol, W. ..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	10	10	..	..	..	..	..	..	..	..	..
Smyth's, Gore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7,107	7,107	..	..	..	..	..	..	..	..	..
Boyd & McNee (late Black's), Greenvale	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	478	478	..	..	..	..	..	..	..	..	..
Glendhu, Mataura.. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	347	347	..	..	..	..	..	..	..	..	..
Southbrook, Waikaka ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	117	117	..	..	..	..	..	..	..	..	..
Smith's, Mataura	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	55	55	..	..	..	..	..	..	..	..	..
Edendale, Wyndham ..	McDonald, A. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,997	1,997	..	..	..	..	..	..	..	..	..
Neill's, Edendale	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	79	79	..	..	..	..	..	..	..	..	..
Valley Road, Pukerau ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3,062	3,062	..	..	..	..	..	..	..	..	..
Moffet & Longshaw's, Waikaia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	72	72	..	..	..	..	..	..	..	..	..
Town's, Mataura	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8,002	8,002	..	..	..	..	..	..	..	..	..
Carr's, Mataura	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	518	518	..	..	..	..	..	..	..	..	..
Porter's, Pukerau	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22	22	..	..	..	..	..	..	..	..	..
Dickson and Walker, Croydon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	37	37	..	..	..	..	..	..	..	..	..
Hokonui, Hokonui ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52,084	52,084	..	..	..	..	..	..	..	..	..
Slaughter-yards, Mataura ..	(Freezing-works use)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	83	83	..	..	..	..	..	..	..	..	..
Perseverance, Pukerau ..	..	..	..	..	..	..	..	open	..	..	..	open	..	..	..	2,052	2,052	..	..	..	..	..	..	..	..	..
Frank's, Pukerau	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	45	45	..	..	..	..	..	..	..	..	..
Rejefsky's, Gore	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	57	57	..	..	..	..	..	..	..	..	..
Clukoski's, Gore	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	28	28	..	..	..	..	..	..	..	..	..
Kirk and Sheddon, Gore ..	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	140	140	..	..	..	..	..	..	..	..	..
Fryer's Excelsior, Gore ..	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	807	807	..	..	..	..	..	..	..	..	..
Gutzchlag's, Gore	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	3,294	3,294	..	..	..	..	..	..	..	..	..
Coal Creek, Wendonside ..	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	40	40	..	..	..	..	..	..	..	..	..
Dryden's, Gore	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	438	438	..	..	..	..	..	..	..	..	..
Kingdon's, Gore	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	27	27	..	..	..	..	..	..	..	..	..
Westbrook, Greenvale ..	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	175	175	..	..	..	..	..	..	..	..	..
Middlemiss, Greenvale ..	..	..	..	..	..	..	..	"	..	..	..	"	..	..	..	15	15	..	..	..	..	..	..	..	..	..

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Marshall's, Otama	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	48	48	..	..	..	..	..	..	..	..	..
Maslin's, Wendon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	854	854	..	..	..	..	..	..	..	..	..
Cambrian (McIvor), Waikaia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	191	191	..	..	..	..	..	..	..	..	..
Northcote's, Waikaia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	685	685	..	..	..	..	..	..	..	..	..
McGowan's, Mataura ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	125	125	..	..	..	..	..	..	..	..	..
Genge's, Wyndham ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,819	2,819	..	..	..	..	..	..	..	..	..
Monaghan's, Pine Bush ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	11	..	..	..	..	..	..	..	..	..
Morley Village (Brazer's) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,096	2,096	..	..	..	..	..	..	..	..	..
Cluny, Orepuki	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	156	156	..	..	..	..	..	..	..	..	..
Waikaka, Gore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	604	604	..	..	..	..	..	..	..	..	..
Croydon, Gore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25	25	..	..	..	..	..	..	..	..	..
Hunter's, Otama	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,944	1,944	..	..	..	..	..	..	..	..	..
North Chatton, Waikaka ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	672	672	..	..	..	..	..	..	..	..	..
Edge's No. 14, Wendon Valley	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,286	1,286	..	..	..	..	..	..	..	..	..
Munro's, Wyndham ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11,151	11,151	..	..	..	..	..	..	..	..	..
Wallace, Nightcaps ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20,147	20,147	..	..	..	..	..	..	..	..	..
Alley's Reliable, Nightcaps ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	704	704	..	..	..	..	..	..	..	..	..
Black Diamond, Nightcaps ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	220	220	..	..	..	..	..	..	..	..	..
Morley Village, Nightcaps ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	301	301	..	..	..	..	..	..	..	..	..
Jones, Edendale	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	280	280	..	..	..	..	..	..	..	..	..
Monaghan's Landslip, Waikaia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	630	630	..	..	..	..	..	..	..	..	..
Spey Bank, Fairfax ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	540	540	..	..	..	..	..	..	..	..	..
Blythe, Nightcaps	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,009	1,009	..	..	..	..	..	..	..	..	..
Healy's, East Gore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	12	..	..	..	..	..	..	..	..	..
Otama, Otama	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	295	295	..	..	..	..	..	..	..	..	..
Mount Linton, Nightcaps ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	634	634	..	..	..	..	..	..	..	..	..
Marlow, Nightcaps ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	10	..	..	..	..	..	..	..	..	..
Harvey's, Chatton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13,586	13,586	..	..	..	..	..	..	..	..	..
Townsend's, Mataura ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	739	739	..	..	..	..	..	..	..	..	..
Totals, Southern District, Middle Island	..	..	..	..	..	..	..	..	..	1	..	..	..	378,421	79,950	458371	6089439	6547810	327	913	1240								
Totals, West Coast District, Middle Island	..	..	..	..	..	..	..	..	..	1	..	..	..	723,689	113261	836950	8808506	9645456	335	1254	1589								
Totals, North Island	..	..	..	..	..	..	..	..	..	..	..	..	..	224,785	17,732	242517	3340515	3583032	101	358	459								
Grand Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1326895	210,943	1537838	18238460	19776298	763	2525	3288								

Add output of following twelve mines, included in previous statement but now abandoned: Motupipi, 360 tons; Westport-Wallsend, 3,441 tons; Waimangaroa, 17,307 tons; Wellington, 2,299 tons; Inkerman, 2,665 tons; Inglewood, 314 tons; Devil's Creek, 343 tons; Inangahua, 71 tons; Murray's Creek No. 2, 450 tons; Burke's Creek, 300 tons; Reefton, 36 tons: total	27,586
Add output of Waikaka, Adam's Flat, and Waimea Mines, inserted twice in statement for 1891	6,518
Output of mines included in statement for 1890, but whose operations were suspended prior to 1890, less three, which are again included in body of statement—namely, Hill's Creek, 779 tons; Lovell's Flat, 323 tons; and Wyndham, 1,988 tons: total, 3,090 tons	132,732
Output of mines included in former statements, but whose operations were suspended prior to 1889	172,529
	20,115,663

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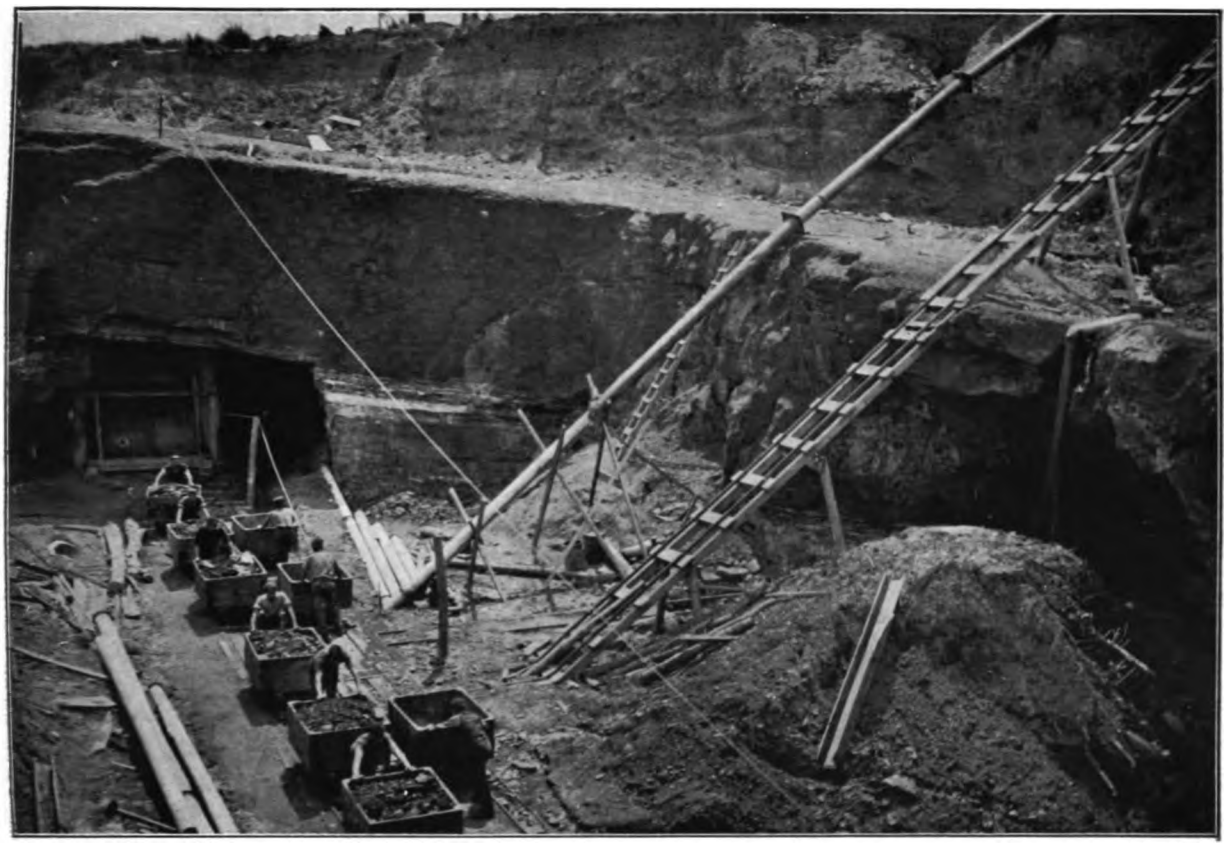
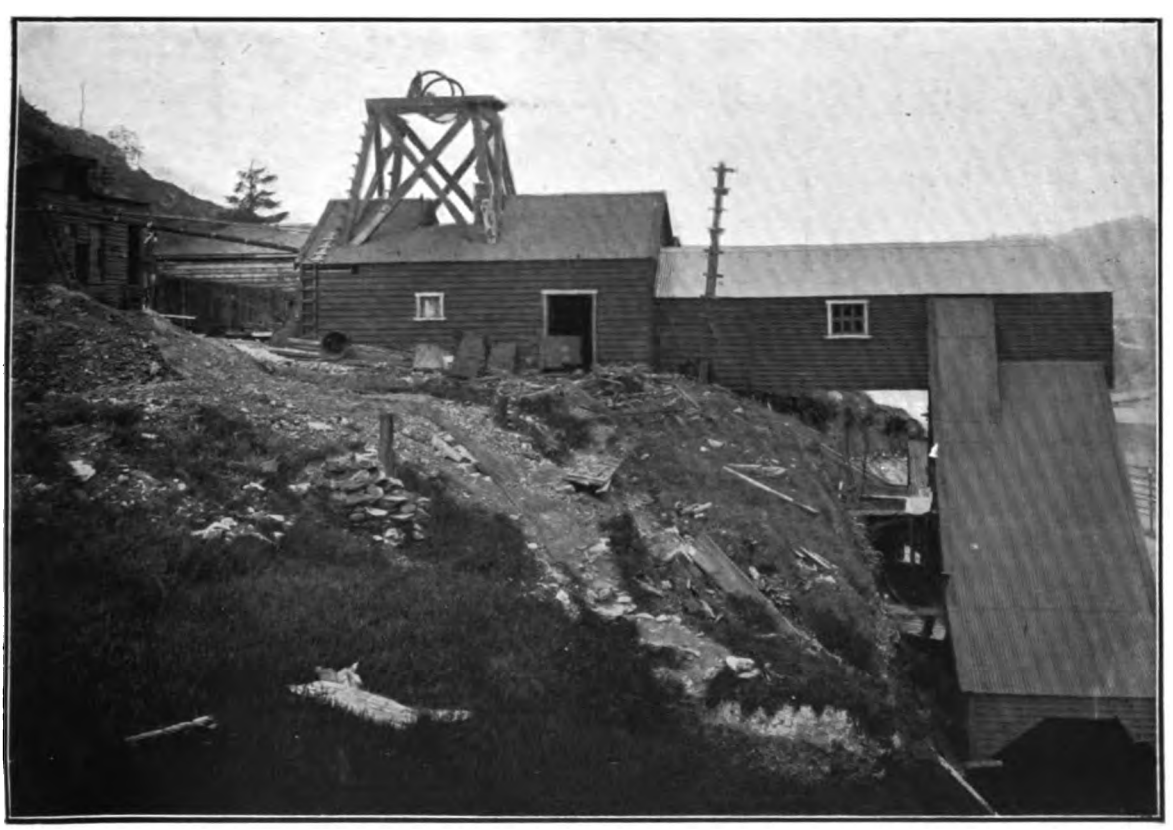


NIGHTCAPS COLLIERY, NIGHTCAPS, SOUTHLAND: TOP OF DRUM JIG, RISE SECTION.



TYNESIDE COLLIERY, BRUNNER, NEAR GREYMOUTH.

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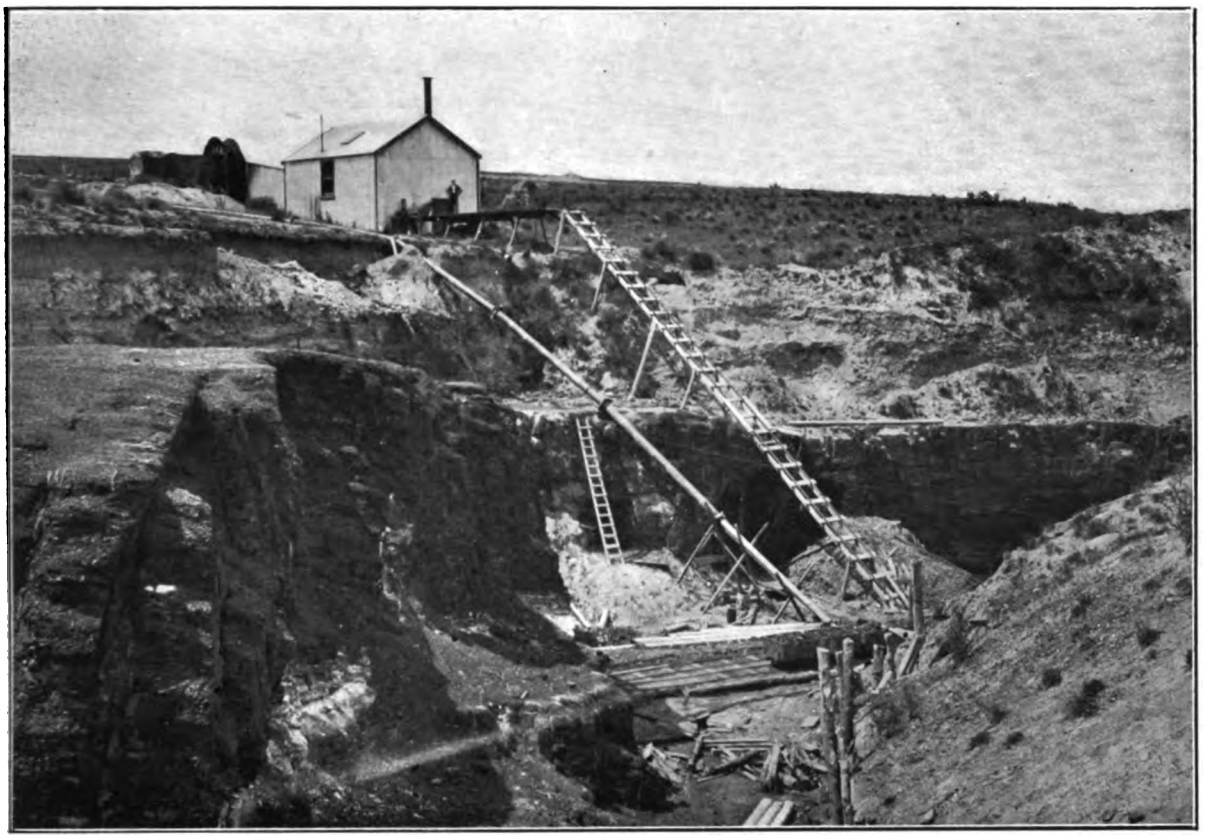
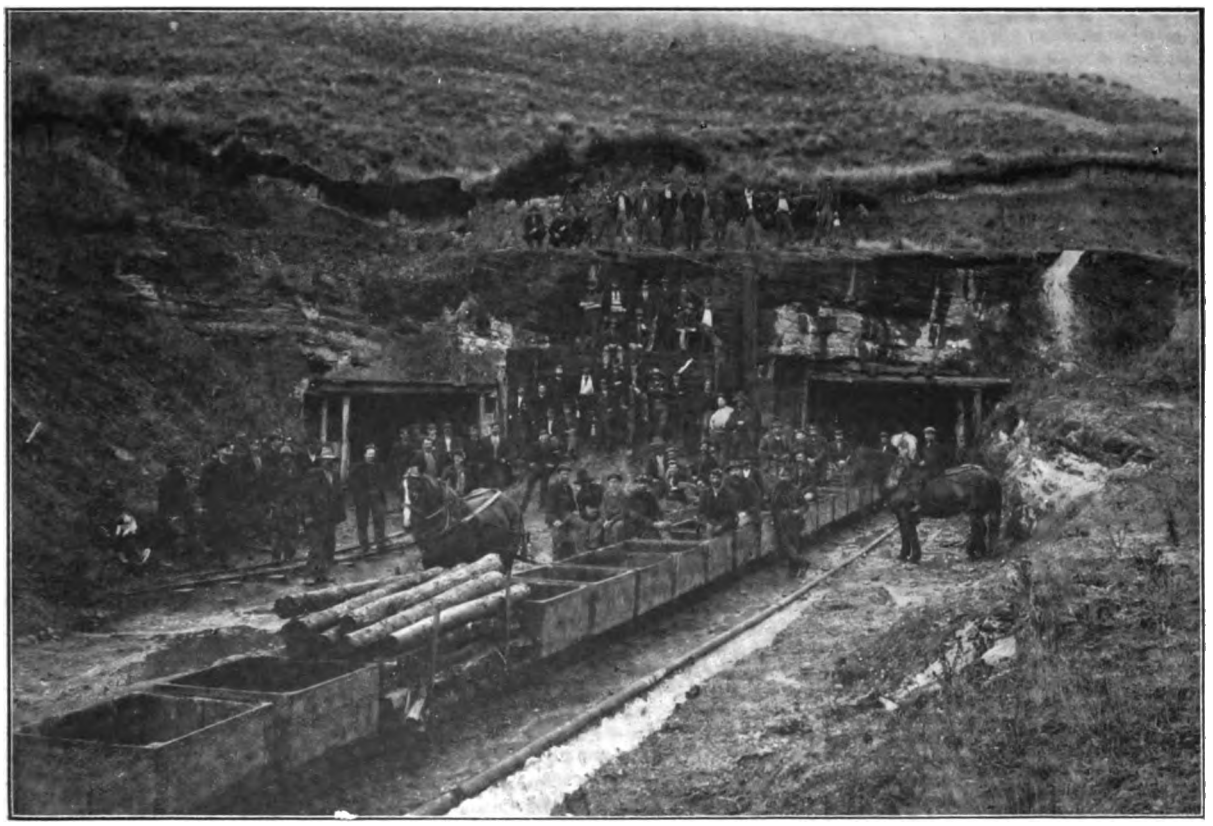


NIGHTCAPS COLLIERY, NIGHTCAPS, SOUTHLAND: VIEW AT OUTCROP, WITH VENTILATING-FAN ON TERRACE.



NIGHTCAPS COLLIERY, SOUTHLAND: GROUP OF EMPLOYEES AT ENTRANCE TO UNDERGROUND WORKINGS.

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1905.

NEW ZEALAND.

STATE COAL-MINES

(REPORT ON THE WORKING OF) FOR THE YEAR ENDING THE 31ST MARCH, 1905.

Presented to both Houses of the General Assembly in accordance with the requirements of Section 14 of "The State Coal-mines Act, 1901."

Mr. JAMES BISHOP, Manager of State Coal-mines, to the UNDER-SECRETARY OF MINES, Wellington.

SIR,— Greymouth, 10th July, 1905.

I have the honour to submit my annual report on the State Coal-mines for the year ending 31st March last.

POINT ELIZABETH COAL-MINE.

Underground Development.

As detailed in my last report, there are three tunnels all driven with the object of operation on what has been named the Exhibition Seam, and they were rendered necessary by the faulty character of the coalfield. Nos. 1 and 2 tunnels are the main haulage-roads from two distinct sections of the mine: Nos. 2 and 3 are connected for purposes of ventilation.

The effect of the faults is shown by the fact that No. 1 tunnel is 100 ft. higher than No. 2, and there is a similar difference between Nos. 2 and 3. The course of the faults as proved by the underground workings is different from what was anticipated: this is especially so as regards the one between Nos. 2 and 3 sections, and this would indicate that the thick coal seen in the cliff on the Seven-mile Creek will be found in No. 3 section as the workings advance to the rise.

The coal-winning so far has been almost entirely confined to the No. 1 and No. 2 sections, and as the workings have advanced north and east, or towards the rise and on the strike or level course, the coal has proved to be of reduced thickness, necessitating a change in the system of working from bord and pillar to longwall, and at the same time the rate paid for hewing the coal has had to be increased. The change of system will, however, enable a much larger quantity of this thin coal to be won than would have been possible under the bord-and-pillar system, and there will be economies in connection with roads, &c., which will largely counterbalance the effect of the increased hewing-rate. The second seam, which exists only in the No. 1 section, continues of good average thickness for a short distance east of the fault-line, when it also thins; in going to the rise a good workable thickness is maintained.

No. 3 section: A road has been laid into this section connecting it with No. 2 level, and a small quantity of coal is now being won from this section, which is delivered to the endless-rope haulage at No. 2 for conveyance to the bins or railway-trucks.

Exploratory work with the object of providing for future requirements: A pair of dip headings have been started and are now in course of being driven. These have reached a length of 26 chains; the grade is 1 in 5 (approximate): the coal is of excellent quality, and has maintained an average thickness of 10 ft. without a break, and very little water has been met with. In addition to these exploratory drives a borehole is being put down from the surface, the object being to prove the position of the lower seams known as the Moody's Creek coal. The probable depth of this bore is calculated to be 1,200 ft., and it has been located at a convenient point for working the coal should it be found advisable to sink a shaft for that purpose.

The plan attached shows the present underground workings, the new dip headings, and the location of the borehole.

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Surface Works.

The railway for conveyance of the coal to the shipping-port is now complete, excepting buildings at stations. The coal-storage bins have also been completed, the capacity being approximately 2,000 tons, and they have proved so far of great value, inasmuch as we are enabled to keep the mine at work when shipping is delayed from any cause. Coal-picking and automatic distributing-belts are to be added to the bin-equipment: these are on order, but not yet delivered.

Endless-rope haulage: This plant continues to work well, and meets all requirements.

Ventilating-fans: The mine-workings are ventilated by fans, one on each section, actuated by horizontal steam-engines; by them ample air is produced, and they will be equal to the requirements for some years.

Workshops: These have been equipped with excellent machine tools, enabling considerable saving to be effected, as repairs and new work (in many cases which would otherwise have to be sent away) can be done at the works.

Sawmill: This plant has been improved during the year by the addition of a planing-machine. The mill continues to be of great value to the mine, as by it the whole of the sawn timber for underground use and for surface-erections is obtained at a minimum cost, and without delays often inseparable from having to obtain supplies from outside sources.

In addition to the supply of all the timber for mine purposes, whatever is required for building workmen's houses can now be supplied. Numbers of houses are now in course of erection, and, as the new township is being opened up by pushing on the making of streets, the demand for building-timber will rapidly increase.

Coal-export.

The raising of coal for market was begun in May last year, and up to the 31st March 92,949 tons had been raised and disposed of, the principal portions to the Department of Working Railways.

Class of Coal raised.

Hitherto unscreened coal only has been handled, but as the output now exceeds the demand for this class, it has been decided to add to the plant by erecting screens to enable the requirements of the household trade to be met.

The mine is at present capable of producing 3,000 tons per week.

Labour.

There has been no difficulty in obtaining labour as required, and although the changing thickness of the seam has rendered frequent alterations of hewing-rates, &c., necessary, any difficulty of this kind has been arranged without serious trouble by meeting the workmen's representatives in conference.

Accidents.

There have been a good many minor accidents, and, I regret to say, one fatality during the year, the latter caused by a fall of stone from what appeared to be a perfectly sound roof.

Harbour and Shipping Facilities.

Reference may here be made to the difficulties connected with the carrying-on of a coal trade from the port of Greymouth due to—

(*a.*) The hindrances to shipping entering the port owing to the frequency of heavy seas on the bar, and the shoaling which not infrequently occurs after storms which are mainly due to the effect of the prevailing wind; on several occasions during the past year vessels after loading have had to be lightened of part of the cargo to enable them to get over the bar. And

(*b.*) When ships are available the facilities for loading coal are not such as to enable prompt despatch to be given. More coal-hoppers are required, and a better sytsem of cranes than is now in use.

Steps are, it is understood, in progress which will to some extent remedy the last named defects, but they will fall far short of what is required to make the port reasonably complete. The system now in vogue tends to the maintenance of high shipping freights and extra costs in loading the coal.

SEDDONVILLE COAL-MINE.

In my last report detailed information regarding the former ownership of the mine, its physical features, the various works undertaken to prove existence of coal and its quality, was given, and need not be repeated now. It may, however, be stated that

Underground development

has during the year been continued on the lines described in last report.

The stone tunnel then in course of construction (which forms the main haulage-line) has been completed to the north bank of Chasm Creek, and new workings have been opened from this tunnel in the area of coal formerly known as Grant's Face.

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Thus, as will be seen by reference to the mine-plan, there are now two separate districts or sections in the mine, designated the west and south districts respectively. In the first, the coal was intersected by the stone tunnel, and was found to dip at a high angle towards the south. Workings were then opened, and this coal, which has proved to be of a crushed character, has been worked towards the rise during the development of these workings: the stone tunnel was continued until the coal in Grant's Face was reached. Here the coal is much harder and of superior quality, and from it coal is being obtained which should give good results in locomotive-work. But, although this coal is hard and of improved quality, it has the drawback of being difficult to work, owing to the presence of stone in blocks and bands of very irregular form and thickness.

Haulage Arrangements.

The haulage of the coal is effected by endless rope, which it is intended to extend to the extreme of the south district or beyond, if the exploration of the area south of Chasm Creek warrants this. Meantime, the terminal wheel of the endless-rope system is fixed near the level connecting the west workings with the haulage-line. The distance from this point to the level storage-bins is 116½ chains, requiring the application of 2 miles and 73 chains of rope.

The machinery in use, including haulage-engine, ventilating-fan, and engine have worked satisfactorily during the year, and are now in good order.

Coal raised

There has been 40,090 tons raised during the year. The output from the west workings has been sold principally for bunkering steamers, and that from the south workings since being opened principally to the Department of Working Railways. The selling-prices, owing to the crushed character of the coal, have not been payable, but since the opening of the south workings arrangements have been made whereby better prices will be obtainable, thus in future if trade is maintained there is a good prospect of the mine being made to show a margin of profit.

Future Developments.

The development of the field will in the future be towards the south across Chasm Creek, in which direction exploration-work is now being carried on

The work so far done in connection with the winning of coal from the districts already opened, and by exploration having future requirements in view, shows that the field is broken up into a series of small basins, the continuity of the seam being interfered with by granite intrusions. In the centre of the basins the coal may be as much as from 15 ft. to 18 ft. thick, thinning off towards the edges, as shown by attached sections of the coal exposed north and south of Chasm Creek. In the centre of the basins the coal (especially the lower part) is generally of good quality, towards the edges it becomes crushed. The undesirable features just referred to render the continuation of exploratory and development work imperative.

With the object of utilising the coal that cannot at present be disposed of profitably, consideration has been given to the following methods of treatment:—

(*a.*) The advisability or otherwise of establishing coke-works; or

(*b.*) Of establishing works for the manufacture of briquettes.

As regards the first of these proposals, experiment has proved the coal capable of producing good coke, but the demand for this within the colony is too limited to be of much practical value in disposing of the product of a mine producing small coal in such quantity as Seddonville does.

The manufacture of briquettes is extensively carried on on the Continent of Europe and in England, and coal is thus utilised that could not be sold under ordinary conditions. The small coal is, after mixture with a suitable agglomerating-material, pressed into blocks of whatever size is found most suitable for the trade to be supplied. Given efficient plant, the blocks can be made of such hardness as to stand handling and atmospheric exposure as well as ordinary lump coal. This system, it would appear, is capable of producing profitable results; much, however, depends on the cost of labour and of the agglomerating-material. Detailed estimates of plant are being obtained.

Cost of Producing Coal.

The question of the cost of production has been the subject of much consideration during the year, and has led to frequent meetings between the workmen and management. The limited demand and consequent short time worked have had the effect of maintaining costs at a higher level than would have obtained had the output been larger.

A number of minor accidents have occurred during the year but nothing of a serious character.

The accompanying tracing of the mine-plan shows the workings up to date, and the direction in which future extensions will be made.

In concluding my reports on the State Coal-mines, permit me to say that all the officers connected with the mines have carried out their duties carefully and well, and in numerous consultations I have received valuable assistance from the Consulting Engineer.

I have, &c.,

JAMES BISHOP, Manager.

The Under-Secretary, Mines Department, Wellington.

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ALEXANDER MACDOUGALL, Managing Agent, to the UNDER-SECRETARY, Mines Department.

Seddonville State Coal-mine, Westport.

THIS mine has not been kept in active or constant operation during the year. The quality of the coal has been found to be extremely variable, and the demand so uncertain and intermittent that full time for the miners could not be maintained. Taking the output all through during the twelve months, I estimate that there was not 20 per cent. of good sound coal suitable for household or locomotive purposes to be found in the whole production, as delivered at this port—the remainder being in a soft, mushy, and half-perished state, rendering its sale often difficult and always unsatisfactory. The railways were unable to use this coal profitably for locomotives, unless the greater part of the round lumpy coal were picked and selected for them; but even with this manipulating process Seddonville coal was not looked upon with favour as a steam-generator. I understand, however, that during the last few weeks a new development has taken place in a different part of this mine, which shows a very great improvement in the quality of the coal. The first shipment of this coal (115 tons) came to Wellington in a screened state last Monday, and a finer sample of coal I have not seen landed in any part of New Zealand. If this class of coal can be regularly supplied, a ready and no doubt profitable market will be found for it all over the colony.

There has been such a large preponderance (about 80 per cent.) of small coal found at the Seddonville Mine that it would not have paid to screen the output, and while the screened portion would command a high price—say equal to the best Westport Company's screened—the preponderating small would command very little; consequently the loss by screening the coal from this mine would have been greater than it is even now.

The quantity of coal from this mine which passed through the Managing Agent's office during the past financial year amounted to 35,504 tons 12 cwt. 1qr., valued at £24,871 4s. 6d.

Point Elizabeth State Coal-mine, Greymouth.

Active operations at this mine commenced only on the 8th June, 1904, so that the period under consideration is less than ten months. The quantity of Greymouth State coal which passed through the office of the Managing Agent during that period was 84,282 tons 18 cwt. 3 qr., valued at £81,847 6s., exclusive of sales made to railways and local people in the Greymouth district.

The quality of this coal was found and is still found to be excellent, and the demand for it far exceeds the supply. If the quality and quantity of the coal from these mines keep up their present standard, and the Seddonville product fulfills its present promise, the colony's main supply for the future will be derived from the State coal-mines, and, with the prospects now held out, there should be no hesitation in proceeding with the development of these coal-fields as rapidly as circumstances permit and the demand for the coal requires. The Government has a large tract of coal-bearing country containing an enormous quantity of good sound coal to work upon. But the profitable working of these coal-fields must depend largely upon the amount of skill and economy with which they are developed. Coal cannot be sold cheaply if it is not won cheaply, and in the present field of competition this can only be accomplished under the highest conditions of practical knowledge and economy.

The Department has two coal-hulks in Wellington Harbour—the "Coromandel," which stores about 1,500 tons of coal, and the "Enterprise," which carries about 140 tons. The former was purchased for the purpose of storing and supplying State coal for the use of His Majesty's men-of-war, when they visited Wellington; but the coal at present mined both at the Greymouth and Westport State mines is not found to be suitable for navy use, and it will take a little further development and construction of tramways before arriving at the seams of coal which are known to be well adapted for use on board war-ships. The "Coromandel" will then be required to supply the purpose for which she was purchased, and, until then, she can, as at present, be usefully employed as a storage-hulk for Seddonville coal.

The "Enterprise" is also used to relieve the congestion caused by an excess of small coal or slack produced at the Seddonville Mine, which she supplies for bunkering small coastal steamers loading at Wellington; but, while useful in this respect as a medium for finding an outlet for Seddonville coal, she is barely paying her way otherwise. But all the hulks in the harbour are used only as a means towards an end in the same way.

Very fair and reasonable freight arrangements have been entered into with steamship-owners for the carriage of State coal from Greymouth and Westport to the various ports of the colony, and coal-dealers and private importers who wish to buy cargoes or part cargoes of State coal at f.o.b. prices can, through the same channels, procure the benefit of these arrangements. These arrangements already effect a reduction in freight on coal for Government Departments alone of about £3,000 per annum as compared with those ruling when this office was established.

With reference to the question of establishing depots for the sale of coal in the various centres of the colony, this matter has engaged my attention very fully of late, and I am of opinion that the State coal-mines will never adequately fulfil the object for which they were undertaken until such depots are opened. The initial cost would not be heavy, and it would soon be recouped from profits on sales of coal. Hitherto by far the larger portion of the coal produced from the State mines has been used

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by the railways and other Departments of the Government; but now, with the prospect of larger developments at Greymouth and the erection of screening appliances there, and also the development of the new field recently opened out at Seddonville, where, I understand, permanent screens are also to be erected, I should say that the Government would be justified in establishing depots in the large centres without further delay, and extending gradually to other parts of the colony as more coal became available.

There is practically an unlimited supply of coal, and the quality both for steam and household purposes as now coming forward is all that could be desired; and now that I understand further improvements are being introduced, the increased production of a marketable article should keep pace with the demand. At present there is an opening in the colony for at least 400,000 tons of first-class State coal, which, if available, could be sold to advantage at a large reduction on present prices.

ALEXANDER MACDOUGALL,
Managing Agent.

The Under-Secretary, Mines Department, Wellington, 31st July, 1905.

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New Zealand State Coal-mines.

Balance-sheet of Seddonville Mine at 31st March, 1905, as required by the Audit Office in Accordance with Section 14 of "The State Coal-mines Act, 1901."

Liabilities.	£ s. d.	£ s. d.
To Proportion of debentures allocated to Seddonville Mine ..	80,785 11 9	
Proportion of sundry creditors	2,213 18 1	
Proportion of accrued interest payable	1,050 0 0	
		84,049 9 10
		£84,049 9 10

Assets.			£ s. d.	£ s. d.
By Seddonville Mine—				
Cost at 31st March, 1904		24,376 10 10		
Less stocks stores coal		434 8 11		
			23,942 1 11	
Additional outlay during year			4,942 6 8	
			28,884 8 7	
Less depreciation 10 per cent.			2,888 8 10	
			25,995 19 9	
Stores (stock on hand)		270 9 4		
Coal (stock on hand at mine)	£97 17 0			
" (stock on hand at wharf and afloat)	546 18 9			
		644 15 9		
			915 5 1	
				26,911 4 10
Hulks property account cost			2,600 0 0	
Less depreciation 10 per cent.			260 0 0	
				2,340 0 0
Proportion Greymouth office furniture			112 17 6	
" Wellington "			38 13 3	
			151 10 9	
Less depreciation 10 per cent.			15 3 1	
				136 7 8
Proportion of sundry debtors			.. ..	2,403 2 9
Balance in hand State Coal-mines Account			97,949 4 10	
Less vouchers outstanding			7,414 9 10	
			90,534 15 0	
Proportion allocated to Seddonville Mine			.. ..	45,267 7 6
Balance of profit and loss account		6,109 1 0		
Add balance brought forward		882 6 1		
				6,991 7 1
				£84,049 9 10

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Seddonville Colliery Profit and Loss Account for the Year ended 31st March, 1905.

Liabilities.	£ s. d.	£ s. d.	*Assets.*	£ s. d.	£ s. d.
To Stock of coal at 31st March, 1904	.. ..	221 7 6	By Sales of coal	.. ..	25,756 10 2
Coal-winning—			Stock of coal at mine	97 17 0	
Wages	9,673 1 2		Stock of coal at wharf and afloat	546 18 9	
Material used	530 10 7				644 15 9
Stores	491 6 2		Balance loss	.. ..	6,109 1 0
		10,694 17 11			
Management and office salaries	1,083 19 9				
Rents	83 18 9				
Royalties	99 18 0				
Interest and exchanges	1,962 0 5				
Travelling-expenses	278 7 6				
Printing and stationery	94 0 3				
Stamps and telegrams	113 18 5				
Repairs and maintenance	39 14 10				
Railway-haulage	6,081 9 2				
Insurances	113 6 8				
Compensation for Accidents and Fund	35 15 5				
General expenses	116 4 0				
Marine freights	7,313 6 9				
Hulks Working Account	1,274 9 8				
		18,690 9 7			
Depreciation, property and plant	.. ..	2,888 8 10			
Depreciation, office furniture	.. ..	15 3 1			
		£32,510 6 11			£32,510 6 11

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New Zealand State Coal-mines.

Balance-sheet of Point Elizabeth Mine at 31st March, 1905 (as required by the Audit Office in accordance with Section 14 of "The State Coal-mines Act, 1901").

Liabilities.	£ s. d.	£ s. d.
To Proportion of debentures	59,214 8 3	
Proportion of sundry creditors	7,765 15 5	
Proportion of accrued interest	1,400 0 0	
		68,380 3 8
Balance of Profit and Loss Account	..	17,351 11 10
		£85,731 15 6

Assets.	£ s. d.	£ s. d.	£ s. d.
By Point Elizabeth Mine—			
Cost at 31st March, 1904	28,789 19 5		
Less stores (stock on hand)	288 1 11		
		28,501 17 6	
Additional outlay during the year	..	10,839 16 2	
		39,341 18 8	
Less depreciation, 10 per cent.	..	3,984 8 4	
		35,407 10 4	
Stores (stock on hand)	785 9 0		
Coal (stock at mine) .. £503 0 0			
" (stock at wharf and afloat) 502 0 5			
	1,105 0 5		
		1,890 9 5	
			37,297 19 9
Point Elizabeth Railway—			
Cost at 31st March, 1904	52,996 4 8	..	..
Additional outlay during year	11,419 11 10		
		64,405 16 6	
Transferred by Public Works Department ..	62,540 11 10		
Sale of gravel	180 18 3		
		62,721 10 1	
Balance not received from Public Works Department	..	1,684 6 5	
			1,684 6 5
Proportion, Greymouth office furniture ..	112 17 5		
Proportion, Wellington office furniture ..	88 13 2		
..		151 10 7	
Less depreciation 10 per cent.	..	15 3 0	
			136 7 7
Sundry debtors	..	..	1,845 14 3
Balance in State Coal-mines Account ..	..	97,949 4 10	
Less vouchers outstanding	..	7,414 9 10	
		90,534 15 0	
Proportion allocated to Point Elizabeth Mine	..	..	45,267 7 6
			£85,731 15 6

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Point Elizabeth Colliery Profit and Loss Account for the Year ended 31st March, 1905.

Dr.	£ s. d.	£ s. d.	*Cr.*	£ s. d.	£ s. d.
To Coal-winning—			By Sales of coal		84,771 8 4
Wages	21,702 18 2		Stock at mine	603 0 0	
Materials used	622 0 6		Stock at wharf and afloat	502 0 5	
Stores	1,152 17 0				1,105 0 5
		23,477 15 8	Timber account		144 13 10
Management and office salaries	1,083 19 8		Discounts		13 2 9
Rents	98 18 9				
Royalties	188 17 6				
Interest and exchanges	2,616 0 5				
Travelling-expenses	278 7 5				
Printing and stationery	94 0 3				
Postages and telegrams	113 18 4				
Repairs and maintenance	147 3 0				
Railway haulage	7,110 4 10				
Insurances	184 1 5				
Compensation for accidents and fund	164 11 3				
General expenses	283 5 2				
Marine freights	28,892 3 6				
		41,255 11 6			
Depreciation property and plant		3,934 3 4			
Depreciation office furniture		15 3 0			
Balance		17,351 11 10			
		£86,034 5 4			£86,034 5 4

The foregoing is the balance-sheet and statements of accounts drawn up as required by the Audit Office, in accordance with section 14 of "The State Coal-mines Act, 1901."

JAS. McGOWAN,
Minister of Mines.

State Coal-mines Office, Greymouth, 19th July, 1905.
LOUIS H. EILERS, Accountant.

Examined and found correct—J. K. WARBURTON, Controller and Auditor-General.

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Balance-sheet of the New Zealand State Coal-mines.

Statement of Liabilities and Assets at 31st March, 1905.

Liabilities.	£ s. d.	£ s. d.
Debenture loan	140,000 0 0	
Sundry creditors	9,979 13 6	
Accrued interest	2,450 0 0	
		152,429 13 6
General Profit and Loss Account—		
Net profits for the year ended 31st March, 1905	11,242 10 10	
Less debtor balance year ended 31st March, 1904	882 6 1	
		10,360 4 9

Assets.			£ s. d.	£ s. d.
Point Elizabeth Colliery and Development Property Account—				
Cost at 31st March, 1904			16,908 5 6	
Additional outlay during the year			1,517 19 10	
			18,426 5 4	
Machinery, plant, ropes, and rolling-stock—				
Cost at 31st March, 1904	£10,147 12 0			
Additional outlay during the year	8,457 11 1			
	18,605 8 1			
Buildings at mine—				
Cost at 31st March, 1904	£1,146 0 0			
Additions during year	864 5 8			
	2,010 5 3			
Cottages	300 0 0			
			20,915 8 4	
			39,341 13 8	
Less depreciation 10 per cent.			3,934 3 4	
			35,407 10 4	
Stores (stock on hand)		785 9 0		
Coal (stock on hand at mine)	£603 0 0			
Coal (stock on hand at wharf and afloat)	502 0 5			
	1,105 0 5			
			1,890 9 5	
				37,297 19 9
Seddonville Colliery and Development Property Account—				
Cost at 31st March, 1904			9,293 13 3	
Additional outlay during the year			3,357 12 5	
			12,651 5 8	
Machinery, plant, ropes, and rolling-stock, cost at 31st March, 1904	£13,698 8 8			
Additional outlay during the year	1,584 14 3			
	15,283 2 11			
Buildings at mine	590 0 0			
Cottages at mine	360 0 0			
			16,233 2 11	
			28,884 8 7	
Less depreciation, 10 per cent.			2,888 8 10	
			25,995 19 9	
Stores (stock on hand)		270 9 4		
Coal (stock on hand at mine)	£97 17 0			
Coal (stock on hand at wharf and afloat)	546 18 9			
	644 15 9			
			915 5 1	
				26,911 4 10

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Point Elizabeth Railway Property Account—									
Cost at 31st March, 1904	£52,986	4	8						
Additional outlay during the year ..	11,419	11	10						
				64,405	16	6			
Transferred by Public Works Deparment	62,540	11	10						
Sale of gravel	180	18	3						
				62,721	10	1			
Balance owing by Public Works Department				1,684	6	5			
..								1,684	6	5
Hulks Property Account—Cost				..	..		2,600	0	0	
Less depreciation, 10 per cent.				..	..		260	0	0	
								2,340	0	0
Greymouth Office Furniture Account..				..	..		225	14	11	
Wellington				..	..		77	6	5	
							303	1	4	
Less depreciation, 10 per cent.				..	..		30	6	1	
								272	15	3
Sundry debtors				..	..		..	3,748	17	0
Cash in hand and in the Public Account at 31st March, 1905 ..				..	..		97,949	4	10	
Less vouchers (outstanding)				..	..		7,414	9	10	
								90,534	15	0
£162,789 18 3								£162,789	18	3

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Statement of General Profit and Loss Account for the Year ended 31st March, 1905.

Dr.	£ s. d.	£ s. d.	*Cr.*	£ s. d.	£ s. d.
To Point Elizabeth Colliery—			By Point Elizabeth Colliery Working Account: Gross profits	62,543 6 11	
Management and office salaries	1,083 19 8		Seddonville Colliery Working Account: Gross profits	15,485 0 6	
Rents	98 18 9				78,028 7 5
Royalties	188 17 6		Discounts		13 2 9
Interest and exchange	2,616 0 5				
Travelling-expenses	278 7 5				
Printing and stationery	94 0 3				
Postages and telegrams	113 18 4				
Repairs and maintenance	147 3 0				
Railway-haulage	7,110 4 10				
Insurances	184 1 5				
Compensation for accidents and fund	164 11 3				
General expenses	283 5 2				
Marine freights	28,892 3 6				
Depreciation: mine, buildings, plant, and machinery	3,934 3 4				
		45,189 14 10			
Seddonville Colliery—					
Management and office salaries	1,083 19 9				
Rents	83 18 9				
Royalties	99 18 0				
Interest and exchange	1,962 0 5				
Travelling-expenses	278 7 6				
Printing and stationery	94 0 3				
Postages and telegrams	113 18 5				
Repairs and maintenance	39 14 10				
Railway-haulage	6,081 9 2				
Insurances	113 6 8				
Compensation for accidents and fund	35 15 5				
General expenses	116 4 0				
Marine freights	7,313 6 9				
Hulks' Working Account	1,014 9 8				
Hulks' Depreciation Account	260 0 0				
Depreciation: mine, buildings, plant, and machinery	2,888 8 10				
		21,578 18 5			
Greymouth and Wellington office furniture account depreciation		80 6 1			
Balance net profits for the year		11,242 10 10			
		£78,041 10 2			£78,041 10 2

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Statement of Point Elizabeth Colliery Working Account for the Year ended 31st March, 1905.

Dr.	£ s. d.	£ s. d.	*Cr.*	£ s. d.	£ s. d.
To Coal-winning—			By Sales of coal	..	84,771 8 4
Wages	21,702 18 2		Stock of coal on hand—		
Materials used	622 0 6		At mine	603 0 0	
Stores used	1,152 17 0		At wharf and afloat	502 0 5	
		23,477 15 8			1,105 0 5
Balance gross profits at mine	..	62,543 6 11	Timber account	..	144 13 10
		£86,021 2 7			£86,021 2 7

Statement of Point Elizabelh Colliery Profit and Loss Account for the Year ended 31st March, 1905.

Dr.	£ s. d.	£ s. d.	*Cr.*	£ s. d.
To Management and office salaries	1,083 19 8		By Balance of Working Account: Gross profits at mine	62,543 6 11
Rents	98 18 9			
Royalties	188 17 6			
Interest and exchange	2,616 0 5			
Travelling-expenses	278 7 5			
Printing and stationery	94 0 3			
Stamps and telegrams	113 18 4			
Repairs and maintenance	147 3 0			
Railway haulage	7,110 4 10			
Insurances	184 1 5			
Compensation for accidents and fund	164 11 3			
General expenses	283 5 2			
Marine freights	28,892 3 6			
Depreciation: mine, buildings, plant, and machinery ..	3,934 3 4			
		45,189 14 10		
Balance: Net profits for the year ..	..	17,353 12 1		
		£62,543 6 11		£62,543 6 11

Statement of Seddonville Colliery Working Account for the Year ended 31st March, 1905.

Dr.	£ s. d.	£ s. d.	*Cr.*	£ s. d.	£ s. d
To Stock of coal on hand at 31st March, 1904	..	221 7 6	By Sales of coal	..	25,756 10 2
Coal-winning—			Stock of coal on hand—		
Wages	9,673 1 2		At mine	97 17 0	
Materials used	530 10 7		At wharf and afloat	546 18 9	
Stores used	491 6 2				644 15 9
		10,694 17 11			
Balance: Gross profits at mine ..	..	15,485 0 6			
		£26,401 5 11			£26,401 5 11

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Statement of Seddonville Colliery Profit and Loss Account for the Year ended 31st March, 1905.

Dr.	£ s. d.	£ s. d.	*Cr.*	£ s. d.
To Management and office salaries	1,088 19 9		By Balance of Working Account: Gross profits at mine	15,485 0 6
Rents	83 18 9		Balance: Loss	6,093 17 11
Royalties	99 18 0			
Interest and exchange	1,962 0 5			
Travelling-expenses	278 7 6			
Printing and stationery	94 0 8			
Stamps and telegrams	113 18 5			
Repairs and maintenance	89 14 10			
Railway haulage	6,081 9 2			
Insurances	113 6 8			
Compensation for accidents and fund	35 15 5			
General expenses	116 4 0			
Marine freights	7,313 6 9			
Hulks Working Account	1,014 9 8			
Hulks depreciation	260 0 0			
Depreciation: Mine, buildings, plant, and machinery ..	2,888 8 10			
		21,578 18 5		
		£21,578 18 5		£21,578 18 5

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Statement of the Receipts and Expenditure of the State Coal-mines Account for the Year ended 31st March, 1905.

Dr. *Receipts.*	£ s. d.	£ s. d.
To Cash in hand and in Public Account at 31st March, 1904	..	1,338 6 9
Sales of coal, Point Elizabeth	83,539 12 6	
Sales of coal, Seddonville	25,076 8 8	
		108,616 1 2
Debentures issued	33,000 0 0	
Transfer of railway	62,540 11 10	
Recoveries	6,008 19 1	
		101,549 10 11
		£211,503 18 10

Cr. *Expenditure.*	£ s. d.	£ s. d.
By Point Elizabeth Colliery—		
Property and development	3,482 11 8	
Machinery, plant, and rolling-stock	6,692 1 4	
Buildings	432 9 10	
Materials and stores	4,089 3 5	
Wages	20,501 6 9	
Wharfage, &c. (Wellington)	130 17 8	
		35,328 10 8
Railway construction	..	11,906 14 9
Seddonville Colliery—		
Property and development	3,100 11 11	
Machinery, plant, and rolling-stock	1,411 4 9	
Materials and stores	1,319 8 9	
Wages	9,782 15 8	
		15,614 0 8
Hulks—		
Property account	2,600 0 0	
Working account	742 9 9	
		3,342 9 9
Greymouth office furniture	156 6 8	
Wellington	77 6 5	
Management and office salaries	2,162 1 1	
Rent	142 5 0	
Royalties	197 19 9	
Interest and exchange	3,786 9 3	
Freights	31,469 19 1	
Travelling-expenses	574 7 2	
Printing and stationery	175 4 3	
Postages and telegrams	227 16 9	
Repairs and maintenance	282 12 11	
Haulage	14,760 0 6	
Insurances	941 16 4	
Compensation for accidents	180 [illegible]	
General expenses	[illegible]	
Refunds (overpayments)	[illegible]	
Cash in hand and in Public Account at 31st March, 1905		
Less vouchers passed outstanding ..		

State Coal-mines Office, Greymouth, 19th July, 1905.
LOUIS H. EILERS, Accountant.
P. HEYES, F.S.A.A. Eng., Inspecting Accountant.

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REMARKS ON THE STATE COAL-MINE ACCOUNTS.

THE capital outlay on the Point Elizabeth Colliery is ... ... £37,279 19s. 9d.
The capital outlay on the Seddonville Colliery is ... . £26,911 4s. 10d.

On the general Profit and Loss Account—that is, the result of operations of both mines conjointly, the net profits are ... ... £11,242 10s. 10d.

This equals a return of 8 per cent. on the debenture capital employed, after allowing for full depreciation and all expenses.

The Point Elizabeth Colliery Profit and Loss Account shows net profits ... £17,353 12s. 1d.
The Seddonville Profit and Loss Account shows a loss ... ... £6,093 17s. 11d.
after allowing for full depreciation and all expenses.

The net profits realised on Point Elizabeth Colliery over all expenses equals 3s. 9d. per ton on the coal sold.

The net profits realised on the entire operations of both mines over all expenses equals 1s. 1d. per ton on the coal sold.

The sales realised an average return—
On the coal from Point Elizabeth Colliery, of ... ... 18s. 6d. per ton.
On the coal from Seddonville Colliery, of ... ... 13s. 3d. per ton.

The cost of coal-winning—that is, in the binns—
At Point Elizabeth Colliery ... ... £62,543 6s. 11d., equal to 5s. a ton.
At Seddonville Colliery ... ... £10,694 17s. 11d., equal to 5s. 4d. a ton

P. HEYES, F.S.A.A. Eng.,
Inspecting Accountant.

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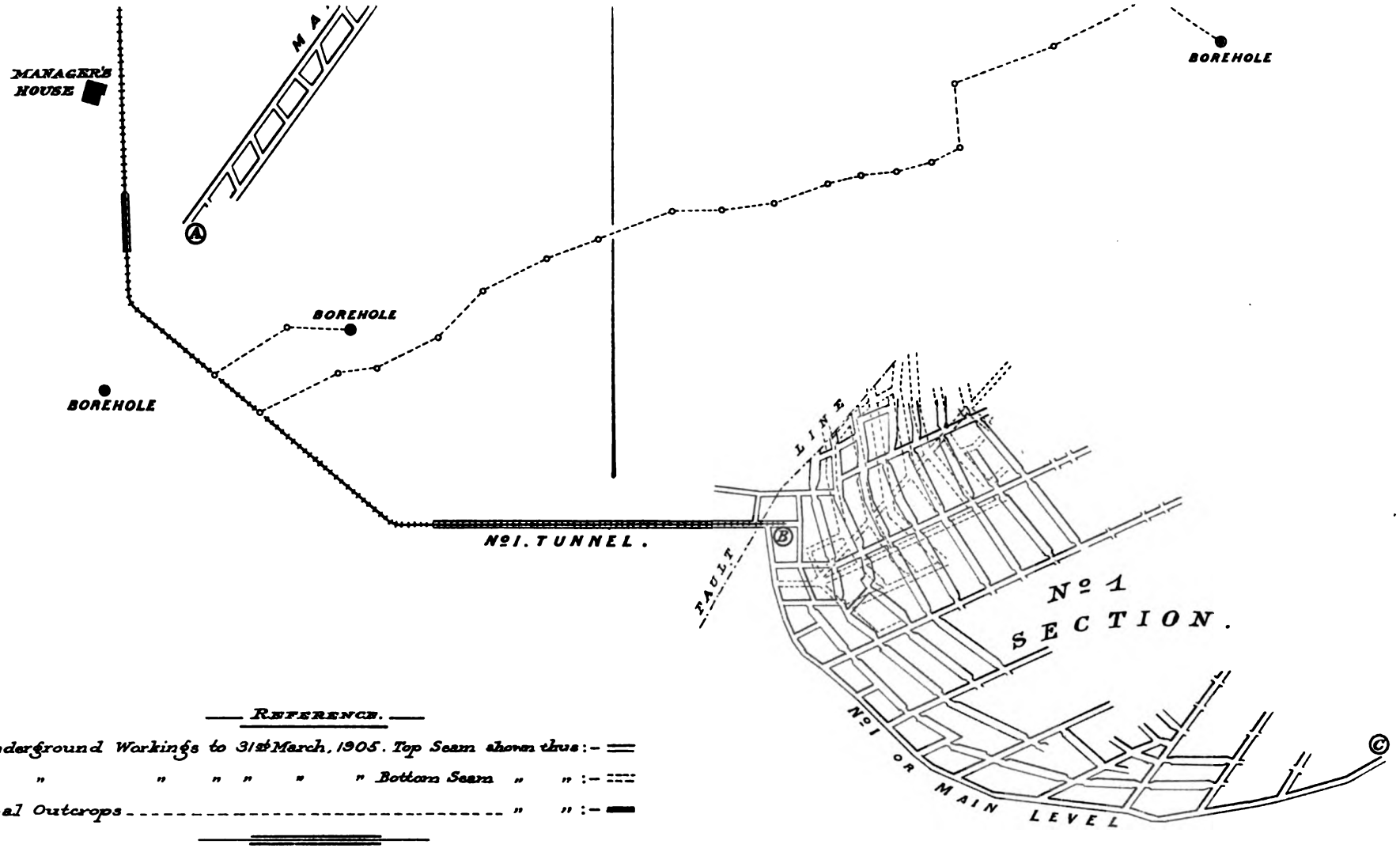

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NEW ZEALAND STATE COAL-MINES.

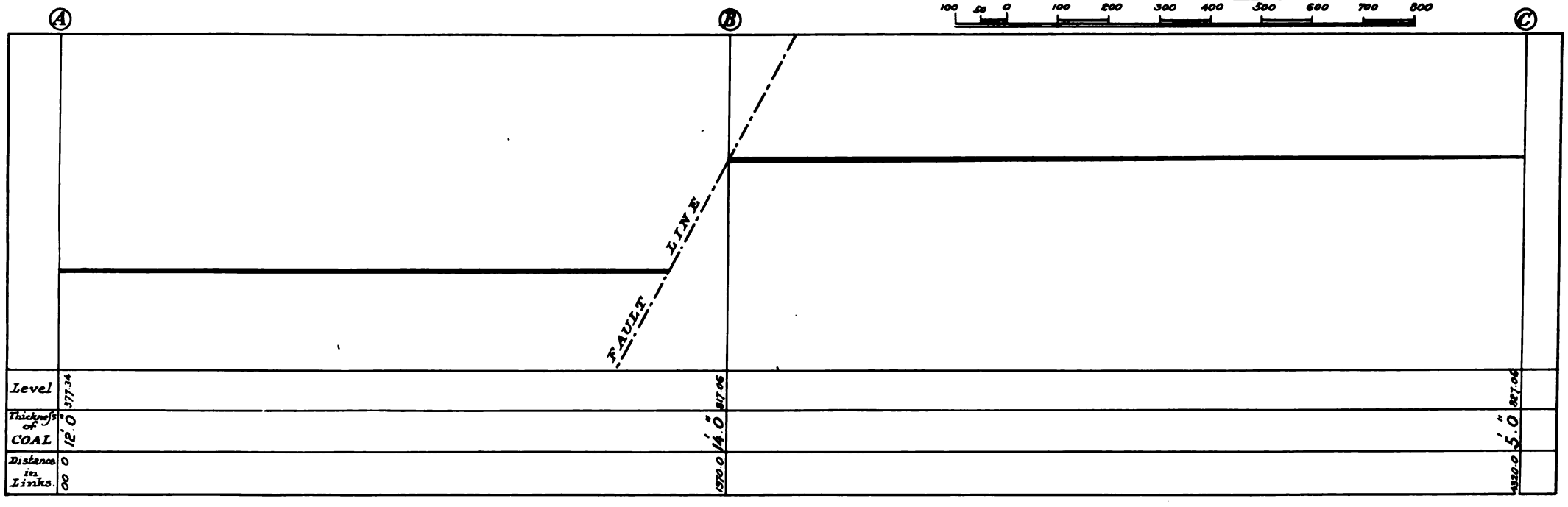
James Bishop. M.I.M.E. Manager.

POINT ELIZABETH COLLIERY.

APPROXIMATE SECTION SHOWING COAL DISPLACED BY FAULT BETWEEN Nos 1 & 2 TUNNELS.

Scale of Feet.

100 50 0 100 200 300 400 500 600 700 800



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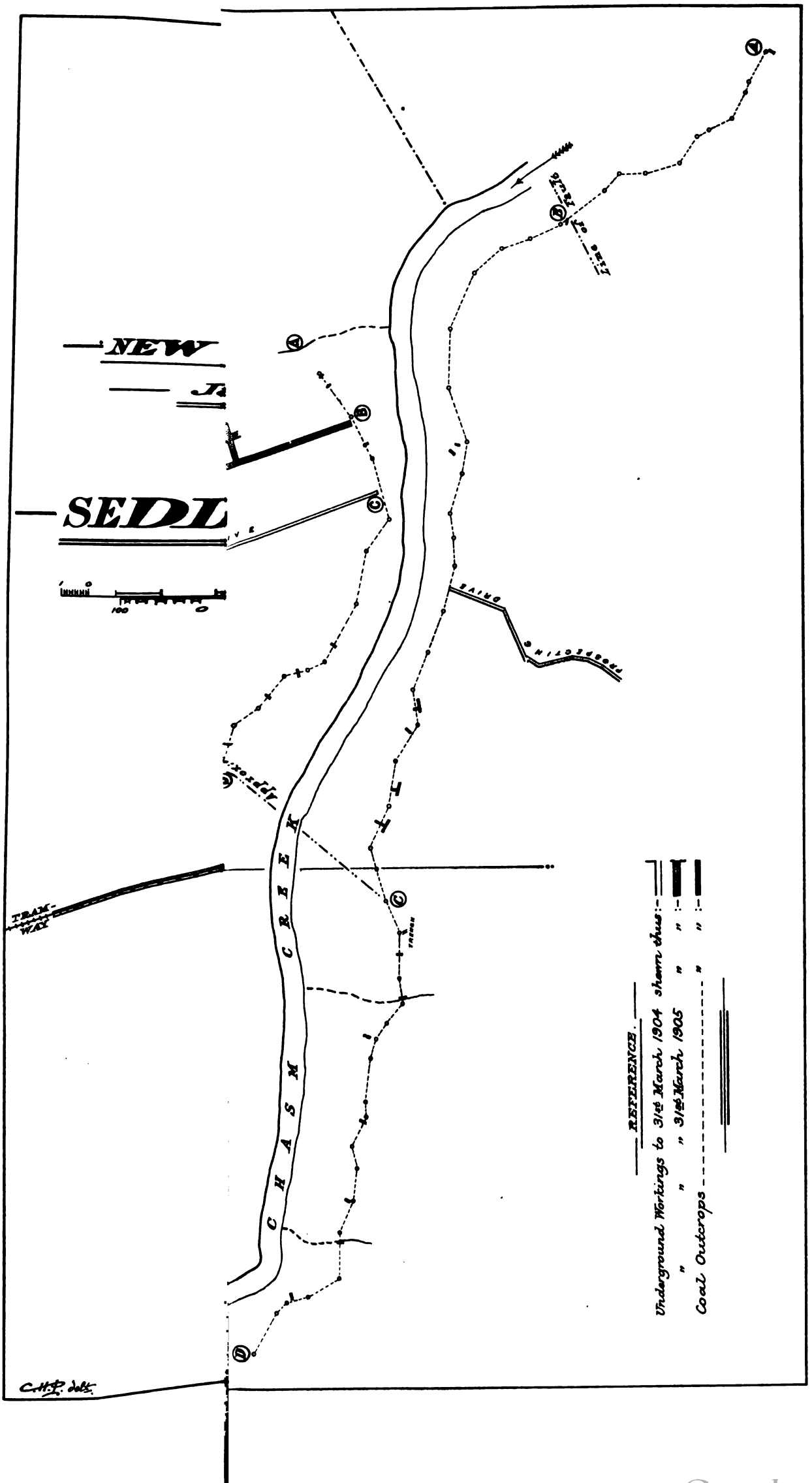

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